Quality Care, Inter-sectorial, Community-Driven Health Service Improvement Project for the Department of Chontales, Nicaragua

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MID-TERM EVALUATION REPORT

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PROJECT HOPE

The External Evaluator would like to thank all members of the mid-term evaluation team for their participation and hard work during the data collection and assessment phases of the evaluation. Team members all made important contributions to this report and their observations and comments were critical to the success of this report. The participatory nature of this evaluation demanded team members actively and critically review the progress of the CS program, and all members completed this task with the highest standards and with the goal of improving the program.

The staff of the Project HOPE Child Survival Program in Chontales and their Ministry of Health counterparts form an impressive partnership that is improving the quality and sustainability of health services in area of great need, and they should be commended for this effort.

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TABLE OF CONTENTS

ACRONYMS

ADRA	Adventist Relief Association, CS PVO
ASDI	Swiss, Water and Sanitation Organization
BASICS	Basic Support for Institutionalizing Child Survival
BCC	Behavior Change Communications
BF	Breast-feeding
Brigadistas	Community-based health volunteers (Spanish)
CORE	Child Survival Collaborations and Resources Group
CORU	Community Oral Rehydration Unit
CS	Child Survival
CSGP	Child Survival Grants Program
CSTS	Child Survival Technical Support
DCM	Diarrheal Case Management
DIP	Detailed Implementation Plan
EPI	Expanded Program for Immunizations
FORSAP	Government of Holland Health Project-Chontales
HCPB	Maternal and Child Health Card
HFA	Health Facilities Assessment
HIS	Health Information Systems
HKI	Helen Keller International
HQ	Headquarters
IEC	Information, Education and Communication (synonym for BCC)
IMCI	Integrated Management of the Childhood Illness
INISA	National Institute for Water and Sanitation (Spanish acronym)
KPC	Knowledge, Practice and Coverage
MNC	Maternal and Newborn Care
MOH	Ministry of Health
MOST	The USAID Micronutrient Project
NGO	Non-governmental Organization
NUTR	Nutrition
ORT	Oral Rehydration Treatment
ORS	Oral Rehydration Salt
PAHO	Pan American Health Organization
PCM	Pneumonia Case Management
PH	Project Hope
PM	Project Manager
PVO	Private and Voluntary Organization (USAID registered NGO)
RDA	Recommended Daily Allowance
SES	Socioeconomic Status
SILAIS	Ministry of Health departmental subdivision
TA	Technical Assistance
TBA	Trained Birth Attendant
TT	Tetanus Toxiod Vaccine
UNICEF	United Nations Children's Education Fund
US	United States
USAID	United States Agency for International Development
VA	Vitamin A
WHO	World Health Organization

A. Executive Summary

Project HOPE (PH) has implemented a successful Child Survival program in the Department of Chontales in Nicaragua for the past two years. Project HOPE partners with the departmental and municipal Ministry of Health (MOH) to directly improve their capacity to deliver child survival interventions. This model is particularly sustainable and innovative. The enclosed report reflects the efforts of a collaborative mid-term evaluation of the PH-Chontales Child Survival Program progress, which was implemented in August of 2000.

The project area is large, serving a total population of over 250,000 persons. Target beneficiaries, which include women of child-bearing age and children under the age of 6, total about 135,000. The key interventions are focused on the leading causes of child and maternal mortality and are: 1) Immunizations, 2) Diarrheal Case Management, 3) Pneumonia Case Management, 4) Nutrition and 5) Maternal and Newborn Care. The Department of Chontales was selected for the project site because of its location within USAID Mission priority areas and because higher than country average maternal mortality rates are reported here.

The mid-term evaluation utilized individual interviews and group discussions to collect data and impressions about the project from the MOH, PH staff at the field and headquarters level, volunteers health workers, community members and others. In addition, data was collected from PH and MOH records to confirm adherence to the Detailed Implementation Plan (DIP) workplan.

Key strengths of the project identified by the mid-term evaluation team can be summarized as follows:

- Community member's state health services have improved in the project area in the last two years.
- Improved feeding practices were documented.
- Excellent relations between Project HOPE and the MOH were demonstrated.
- Community participation is high in many areas and positive examples of cooperation to improve health services were identified.
- Project HOPE identified key weaknesses to its managerial structure and began addressing these debilities prior to mid-term evaluation.
- Project HOPE has hired a new Project Manager with a good technical background, knowledge of PH's programming in Nicaragua and a willingness to work collaboratively with PH HQ, and technical partners in Central America and the US.
- Project HOPE staff are well educated and are a vital resource to the program.
- Project HOPE's key strategy, working directly with the MOH to improve their capacity, serves as an innovative and highly sustainable model. Achieving results under this model that may be replicated by other CS projects.

The recommendations developed by the evaluation team are meant to improve management and reported outcomes of the program in the following two years of operations. The team concurred that maximizing impact as reported by the KPC would need to be a key priority for the PH and MOH staff in the next two years. The key recommendations are summarized below:

- Re-prioritize interventions and select key objectives within each intervention. The project had a large number of interventions and objectives which they tried to tackle from the start of the project. A lack of progress over most interventions should be helped with a reprioritization that focuses on the highest impact interventions.
- Focus on results rather than activities. The need to reprioritize and focus on results is linked. PH staff has already begun this process of reorganization to ensure maximum results at the end of year 4 of the CS project.
- Remain focused on the goal of improving the capacity of the MOH, rather than providing less sustainable means of support. It is easy for a team to stray from the original intention and design of this project, because improving the capacity of a partner is far more difficult a process than implementing activities with your own staff. Strong leadership to critically evaluate when an activity is strictly in compliance with the designed capacity building model will be critical to maintaining the team on track in the next two years.
- Identify "Best Practices" and capitalize on these successes. Many examples of successful community participation were witnessed during the evaluation. PH should make additional efforts in the second half of the project to document these successes and to utilize the examples within the project to develop and promote the same or similar initiatives in other communities.
- Improve use of data to make key management decisions. PH and MOH staff will need to use data more consistently to assist in the decision making process. Staff needs to learn to utilize data in managerial as well as technical situations.
- Improve the capacity of Project HOPE staff. The project has focused a great deal of attention on improving the capacity of its key partner, the MOH. While this is a necessary outcome of the project design, PH staff need to keep pace with changes to technical aspects of the CS interventions and to developing their own managerial skills.
- Improve IEC and training materials. To date, IEC materials have been compiled from existing materials from expert groups such as UNICEF, WHO and MOST. Final materials were not always field tested and final versions of materials were sometimes inadequately copied and disseminated. Project HOPE is directly addressing this recommendation and has secured funds from a private source, Glaxo-Wellcome, to develop materials that will be utilized on a National level, and then adapted in four additional Latin American countries. This initiative is being implemented with assistance from BASICS and CHANGE and is coordinated at the HQ level of PH.

The Project HOPE staff remains dedicated to the project goals and committed to making improvements that will result in greater reductions of childhood mortality. Overall, the project has many strengths to build upon and can reach the overall project goals in the remaining two years of programming with strong leadership and a focus on priorities and results.

B. Assessment of Progress Towards Achievement of Program Objectives

1. Technical Approach

a. Project Overview:

The program evaluated for this mid-term evaluation is located in the Department of Chontales, Nicaragua, along the Northern border of the country and along Lake Cocibolca. General economic, educational and health indicators are lower here than in other areas of the country, prompting Project HOPE's decision to work in Chontales. Juigalpa, 137 km south east of Managua, is the departmental capital and the center of operations of the Ministry of Health's departmental subdivision (SILAIS). The main office for the program, housing Project HOPE staff, is also located in this city.

The program covers 5 interventions: 1) Immunizations, 2) Diarrheal Case Management, 3) Pneumonia Case Management, 4) Nutrition and 5) Maternal and Newborn Care. The project target area covers eight municipalities within the Department of Chontales with a total population of 261,983. The target populations include 80,376 women of reproductive age (15-49), 7,465 children under the age of one, and 44,264 children between one and five years of age.

The goal of the project is to reduce morbidity and mortality in children under five years of age. Project HOPE's strategy for accomplishing its goal is to work directly with its partner, the local Ministry of Health/SILAIS, to: 1) improve community outreach, 2) strengthen the leadership and supervisory capabilities of the SILAIS, 3) increase community participation. By working with the SILAIS rather than implementing interventions directly, Project HOPE is utilizing an inherently sustainable program design that will deliver technical expertise to an in-country institution. Project HOPE is well integrated with Ministry's planning process; the Ministry presents Project HOPE with its needs, including training for staff, and Project HOPE evaluates these requests on a trimester basis in coordination with the Ministry planning schedule.

Overall project strengths:

1. Community members state health services have improved in the project area in the last two years. Interviews with community members and volunteers uniformly revealed that there was greater satisfaction with health services since the start of Project HOPE activities in the area.

2. Improved feeding practices: The project made its most signification gains in the area of improved breast-feeding practices. The mid-term evaluation team postulated that the key factors to the success of these objectives have been: a) strong leadership and focus on breast-feeding by Project HOPE and the MOH, b) use of a few clear messages delivered consistently to mothers, d) use of mothers support groups to deliver education, mobilize community participation, and assist with changed behavior. The factors noted here should be further examined and used as a model to improve other interventions.

3. Excellent relations between Project HOPE and the MOH. Project HOPE works directly with the health staff of each municipality and works with the SILAIS (departmental level, directly manages the 8 municipalities). Project HOPE staff is intimately involved with planning and capacity building at this local level and works in a cooperative manner with the MOH. Project HOPE was specifically lauded by the Ambassador of Holland during a recent final evaluation of a Dutch program (FORSAP) for utilizing this direct, local strategy with the Ministry.

4. Community participation: Perhaps in-part due to culture and perhaps in-part a remnant of the Sandinista Government, the communities show tremendous cohesiveness and ability to work cooperatively to meet their health needs. Specifically, during the evaluation, communities were found to have organized themselves to provide services with minimal or with no outside assistance. In certain areas, health volunteers still exist that have extensive training in managing health services for remote communities (provide injections, medications and minor surgery), as was promoted under Sandinista rule. Project HOPE has been supportive and improved community participation and still has ample opportunity to improve upon this success by better understanding the most successful cases of community participation within the project area.

5. Project HOPE identified key weaknesses to its managerial structure and began addressing these debilities prior to the mid-term evaluation. Prior to the evaluation, Project HOPE had realized that many objectives of this program were not on-track as planned in the DIP. A key to this lack of progress was identified as the management of the project at the local and national level and from HQ. An in-depth analysis was completed by an outside consultant and corresponding improvements began to be implemented by PH immediately. Most changes were made prior to the mid-term evaluation.

6. Project HOPE's new Project Manager. As part of the administrative adaptations noted in item 4, Project HOPE promoted a new manager from within its organization in Nicaragua. The new manager joined the evaluation team and was a critical member. He has the potential to motivate the staff to be more results oriented, more focused and more effective, which will be a great improvement for the final two years of the program.

7. Project HOPE staff are well-educated and are a vital resource. Project HOPE has in place a highly educated, highly motivated staff that will greatly benefit from the proposed administrative changes. With minimal effort, the team should be able to work towards the goals stated in the DIP as re-prioritized during this evaluation.

8. Project HOPE's key strategy is highly sustainable. Project HOPE's decision to work directly with the MOH to improve their capacity, rather than to implement health services themselves, serves as an innovative and highly sustainable model. Achieving results under this model, however, is more difficult and progresses more slowly than for classic CS projects that are responsible for their own implementation. While more difficult, PH should be praised for taking a more long-term view of their presence in Chontales.

Progress Towards Achievement of Program Objectives

Objective	Baseline Level	Mid-term Level	Change*
1. EPI: Increase full immunization coverage from 65% to 80%.	65%	58%	-11%
2. EPI: Increase from 85% to 90% the percentage of children having an immunization card.	84%	87%	+4%
3. NUTR: Increase from 17% to 30% the percentage of mothers exclusively breastfeeding their infant to six months.	17%	33%	+48%
4. NUTR: Increase from 50% to 75% the percentage of children receiving BF during the first hour of birth.	50%	52%	+2%
5. NUTR: Increase from 17% to 30% the percentage of children who continue breastfeeding to 24 months.	17%	24%	+29%
6. NUTR: Reduce from 9.6% to 5% the prevalence of global malnutrition (wt/age) in children < 6 years of age.	10%+	6%	+40%
7. NUTR: Reduce the prevalence of anemia in children <2 years of age from 50% to 30%.**	----	50%	----
8. NUTR: Increase from 70% to 90 % the percentage of kids under 2 years with growth monitoring in the past 4 months	70%	71%	+1%
9. NUTR: Increase the proportion of children eating a varied diet**	----	----	----
10. NUTR: Increase the proportion of children 12-23 mo covering at least 90% RDA for micronutrients, iron and VA**	----	----	----
11. NUTR: Increase from 16% to 40% the proportion of mothers who can identify food sources rich in vitamin A	16%	46%	+188%
12. DCM: Reduce from 31% to 25% the proportion of children <2 years experiencing diarrhea in the last 2 weeks	31%	44%	-42%
13. DCM: Increase from 39% to 50% the ORT use rate	39%	25%	-36%
14. DCM: Increase from 18% to 50% the percentage of mother able to recognize the danger signs of dehydration	18%	23%	+27%
15. DCM: Reduce from 71% to 50% the percentage of cases of diarrhea being treated with antibiotics/antidiarrheal drugs.	71%	50%	+30%
16. DCM: Increase from 3% to 20% the percentage of mothers asking the brigadistas for help when their children have diarrhea.	3%	6%	+100%
17. DCM: Increase from 45% to 60% the percentage of mothers who give their child more/equal amounts of liquid during diarrhea.	45%	53%	+18%
18. DCM: Increase from 50% to 70% the proportion of mother who continued feeding child during diarrhea.	51%	41%	-20%
19. PCM: Increase from 2% to 10% the proportion of mothers recognizing chest in-drawing as a danger sign.	2%	4%	+100%
20. PCM: Increase from 45% to 80% the proportion of mothers able to recognize fast breathing as a danger sign of pneumonia.	45%	58%	+29%
21. PCM: Increase to 80% the proportion of pneumonia cases treated according to IMCI protocols.**	----	----	----
22. MNC: Increase from 25 to 50% the proportion of mothers retaining thie HCPB (health card).	25%	30%	+17%
23. MNC: Increase from 82% to 90% the proportion of pregnant women with at least two prenatal visits.	82%	82%	+0%

Progress Towards Achievement of Program Objectives (cont.)

Objective	Baseline Level	Mid-term Level	Change*
24. MNC: Increase from 56% to 70% the percentage of mothers not desiring a pregnancy in the next two years using modern family planning methods.	56%	62%	+11%
25. MNC: Reduce to 20% the percentage of mothers found pregnant who are adolescents.	26%	10%	+62%
26. MNC: Increase from 24% to 40% the proportion of mothers with at least one postnatal visit.	25%	29%	+16%
27. MNC: Increase from 40% to 60% the proportion of mother with at least 2 dose of TT.	40%	43%	+8%
28. MNC: Increase to 90% the proportion of mothers using iron supplements during the last pregnancy.**	----	47%	----
29. MNC: Increase to 80% the number of women using VA one month post-partum.**	----	21%	----

* The change is calculated relative to the baseline value and then the movement towards(+) or away (-) from the objective is assigned as positive or negative.

**Objective was intended to be measured at mid-term and final phases of the CSGP only. No baseline data is available.

+ The baseline value for Objective 6 was estimated from the DHS-Chontales. No growth monitoring was done at baseline by Project HOPE.

b. A progress report by intervention:

(i) Immunization

Objectives:

Increase full immunization coverage from 65% to 80%.
Increase from 85% to 90% the percentage of children having an immunization card.

Percent effort:

5% (DIP)

Strategy:

Project HOPE proposed working closely with the SILAIS to reduce missed opportunities using IMCI. This would include an evaluation of the vaccination process at the clinic level to identify areas where efficiency, cold chain/logistics, quality of data collection could be improved. The project also proposed to work with the MOH to increase the frequency of "integrated visits" (visit made to a community by a doctor and a team of clinical assistants to provide integrated services; integrated visits occur between scheduled EPI campaigns), and improve supervision. Vitamin A was included with EPI according to MOH policy. Assistance to the SILAIS was also to be coordinated with a variety of partners working in the area, including FORSAP.

The community-level strategy included confirmation of consumer demand and referral of incompletely protected children and women and the use of radio advertisements to announce campaigns.

Evaluation/observations:

Project HOPE has successfully worked with several of the Municipalities to provide IMCI trainings and to implement a community-based census. Other activites successfully completed by the program include: completion of baseline and mid-term KPC surveys, dissemination of KPC results to all partners, development of annual plans, finalization of collaborative agreements with all partners, identification of technical needs of the SILAIS, and completion of joint supervisory visits with SILAIS staff (refer to annex 6 for details of activities completed).

Despite the successful implementation of a wide variety of activites, the full immunization rate has fallen in the project area from 65% to 58% (not a statistically significant decrease), while the percentage of children with a card has increased only a small amount, from 85% to 87% (not statistically significant). The project has not made sufficient progress with either objective at the time of this evaluation, to project meeting these goals by final evaluation without a change in strategy or an increase in effort for the immunization intervention. It should be noted that the MOH changed from a three time per year immunization campaign schedule to a two time per year schedule, which is certainly affecting the drop in immunization rates at the project level.

Specific problems identified during the evaluation that could be leading to the lack of progress with this intervention include:

1- SILAIS/Project HOPE relationship is not well defined and working on an ad-hoc basis (this applies to all interventions). At the time of the evaluation, Project HOPE was taking requests from SILAIS and Municipal Directors and, in most cases providing these services and/or funds without critical evaluation of how the activity fits into project goals or how it will translate into a measurable impact. The amount of support varied greatly depending on the relationship forged between PH and the particular municipality and was not always consistent with the level of need in the area.

2- Most municipalities are still without a census (although PH did work specfically with 2 municipalities to implement this activity) and are evaluating their coveage rates based on outdated information which leads to inflated rates.

3- Evaluation of the vaccination process by PH with the MOH has not taken place. Without an examination of the cold chain, etc. the quality of this intervention remains in question.

4- The MOH is placing a great deal of emphasis on IMCI training while losing focus on maintaining or improving coverage rate. The resources put into IMCI have the potential to improve this intervention in the long run, at least for sick children. However this downward trend in full immunization coverage should be carefully monitored. It should be noted that Project HOPE consistently uses pre and post testing for all trainings, including IMCI.

5- The schedule of the campaigns and the integrated visits is not consistent. There are times when the visit is advertised and personnel are not present on the day specified, frustrating PH staff and communities. Also, while the campaigns and integrated visits were developed to work in harmony, with integrated visits serving as mini mop-up campaigns, there was anectodal evidence that the campaigns and visits were being completed on the same days. Further, it was suggested in interviews with MOH staff that turnout for the integrated visits might be greater than for the campaigns and that the campaigns were more costly than the integrated visits. (The MOH is moving away from campaigns to integrated visits.)

In addition to these problems, Project HOPE is anticipating additional pressures on the MOH as their major donor, FORSAP will be leaving the area in the coming year. This will clearly impact all interventions. FORSAP has provided an estimated $1 million per year to the Department of Chontales over an eight year period. Interviews conducted with the directors of the SILIAS revealed a common approach to managing the withdrawl of funding by FORSAP, namely to find other donors to replace the required funding. Interviews futher indicated that FORSAP did not work with the MOH to develop a meaningful exit strategy. There is little doubt that the absence of this support will affect the CS project in its final two years.

Next Steps/Recommendations:

1- Project HOPE needs to re-evaluate the manner in which it accepts and approves requests from the MOH. A revision of their original agreement would be appropriate based on this mid-term evaluation. It is further recommended that any new agreement demand outcomes that are tied to project objectives in order to maintain progress and monitor impact from the assistance provided. It should be possible to adapt the relationship to be more stringent in the examination of outcomes, while continuing to maintain the excellent relationship that PH has developed with the MOH.

2- The quality of data used in decision making and the manner in which coverage rates are examined is key to assisting the MOH to improve its capacity to deliver quality health interventions. While a census may be appropriate in some municipalities (it is leading to higher coverage rates in the municipalities where it is used) other options should be explored and made available to the Ministry.

3- Implementation of a Health Facilities Survey (HFA), which has been developed for use in areas where clinical IMCI should be considered as soon as possible for this project. The HFA will address issues of cold chain, quality of data collection and will give an evaluation of the trainings that have taken place to date. As PH hopes to utilize community-based IMCI in the second half of the project cycle, the HFA should be adapted to serve the in-coming needs of the community components. This would include interviewing personnel to the level of community volunteer and community members to establish a baseline of their knowledge levels. Greater information about IMCI can be obtained at the CSTS website (see workshop notes from the 1999 USAID RFA Meeting in Virginia), CORE M&E Working Group, PAHO and BASICS.

4- Training was a key component of this program, however the significant amount of training is not necessarily being translated into higher coverage rates that will ultimately meet the goal of the project to reduce childhood mortality. The project needs to evaluate when it will train, who it will train, and how it will evaluate training in a more critical fashion. With specific reference to the immunization intervention, the use of the HFA will serve to improve evaluation by extending beyond pre and post-testing to actual observations of personnel. By incorporating elements of the community-based IMCI HFA, Project HOPE will further evaluate the impact of IMCI by interviewing mothers regarding the level of care that they receive.

5- A thorough evaluation of customer needs, as proposed in the DIP has not been completed. A simple survey or set of qualitative investigations could be conducted (perhaps in key municipalities rather than the entire project area) to determine the level of satisfaction with current health services and to understand communities vision of ideal services. This survey could easily be incorporated into the HFA. Helping the MOH to have a greater customer focus could be a significant, sustainable impact achieved by Project HOPE.

6- Project HOPE would benefit from a complete review of the current state of the immunization system. This could include what visits (campaigns and integrated visits) had actually taken place in the last 6 months or one year, how many children were vaccinated at each visit, what approximate costs were incurred by both visit types, etc. With this information a very simple cost analysis could be conducted to assist the MOH –at the Central level- as it decides whether to continue to move away from the national campaigns. The information should be collected and compiled with the MOH. Project HOPE has been provided with a draft cost effectiveness analysis conducted by the International Eye Foundation in Bolivia to serve as a reference.

7- Project HOPE has a great opportunity to assist the MOH to develop its capacity to deal with the realities of waxing and waning donor funds as the MOH begins to live with the absence of the FORSAP funds. Assisting the MOH to re-prioritize

its funds and activities based on the health data available to them could be a very significant contribution to the MOH's long-term capabilities.

8- While the number of objectives and the indicators selected by Project HOPE are appropriate for this intervention, the significant increase in full immunization coverage proposed will not be achieved without a greater effort expended on this intervention, unless the community participates in monitoring which children need vaccines. During development of the new plan of action, including revised objectives and indicators, PH has doubled the percentage effort for this critical intervention, from 5 to 10%, which is appropriate. A change in overall strategy for this intervention is also needed, taking into account recommendations 1-6 and taking into account the ground-work that has been laid in the past two years with IMCI. Improvements to supervision and monitoring and effective use of large-scale strategies will be important to realizing significant gains in the coming two years.

(ii) Nutrition

Objectives:

Increase from 17% to 30% the percentage of mothers exclusively breastfeeding their infant to six months.
Increase from from 50% to 75% the percentage of children receiving BF during the first hour of birth.
Increase from 17% to 30% the percentage of children who continue breastfeeding to 24 months.
Reduce from 9.6% to 5% the prevalence of global malnutrition (wt/age) in children < 6 years of age.
Reduce the prevalence of anemia in children <2 years of age from 50% to 30%.
Increase from 70% to 90 % the percentage of kids under 2 years with growth monitoring in the past 4 months.
Increase the proportion of children eating a varied diet.
Increase the proportion of children 12-23 mo. covering at least 90% RDA for micronutrients, iron and VA.
Increase from 16% to 40% the proportion of mothers who can identify food sources rich in vitamin A.

Percent effort:

25% (DIP)

Strategy:

The project proposed to increase coverage and improve quality of growth monitoring. Information would be relayed to mothers immediately through the use of a namogram which was developed by Project HOPE-Peru, specifically for this purpose and through the use of other community adapted methods. IMCI would be a key to improving the quality of this intervention, improving collection

of data and counseling and ensuring complete nutritional information would be delivered to the mother of an ill child.

Project HOPE proposed addressing maternal nutrition primarily through improvements to the integrated visits provided by the MOH two to four times per year in rural communities. PH planned to work directly with the MOH to improve all aspects of the integrated visit, including counseling, educational sessions (converting them from lectures to participatory methods), and supervision and monitoring.

In the area of micronutrients, PH proposed provision of vitamin A supplements to the MOH to high risk groups such as post-partum women, malnourished children, children with chronic diarrhea, etc. Pregnant women and children from 6 to 24 mo. would receive iron supplements. Nutritional education at the community level, also utilizing participatory methods and materials from MOST would complement supplementation activities as would community and home based gardens.

To improve the capacity of the MOH to deliver these interventions, PH planned to work directly with MOH staff regarding the management issues of budgeting, planning, supervision, monitoring and evaluation.

Evaluation/observations:

1- The breastfeeding objectives (3), show the greatest improvement of all the interventions. The success was credited to strong leadership from the MOH, good coordination by the assisting partners, and clear messages. It is important to note that PH staff estimated that they spent about 30% of their total effort on breastfeeding alone in order to bring about this success.

2- The project was able to more than double the recognition of VA rich foods by mothers in the target area, from 16% to 46%. Materials used by the project were developed and provided by MOST.

3- Several objectives were established to gain a deeper understanding of the nutritional status of the population through biochemical measurements (hemoglobin levels) and food frequency surveys (percentage of RDA being consumed and range of foods eaten in the diet). At the time of the mid-term evaluation, the project had completed the biochemical analysis of iron levels in blood in children under 2 years of age. Fifty percent of children were found to be anemic based on a cut-off of 11g/dl. Plans are underway to conduct a survey which will capture the information needed to measure improvements in these objectives. This survey is only slightly off schedule as baseline measurements were programmed to be completed at the time of the mid-term evaluation.

4- One objective seeks to encompass the overall goal of the nutrition intervention: reduction of malnutrition from 10% to 5%. While the goal has been met

according to the KPC survery, a separate sample size calculation was not made to address the specific question being asked. (In this case, the KPC cluster sampling method may not be sufficiently large to find the change being proposed.) This goal is very ambitious and maintaining this level of reduction may not be possible without increased effort to this intervention.

5- As part of the midterm evaluation, the objectives for this intervention were reorganized (refer to page 33) according to priority. The objective measuring overall malnutrition was dropped, because re-calculation of sample size and the effort needed to measure the change noted in the DIP would require a great deal of resouces. It was felt that the other objectives reflected progress towards this higher goal. The project staff reprogrammed to spend 10% of their continued effort on the breastfeeding interventions and 15% on the micronutrient interventions.

6- While home gardens were not listed as an objective, they were noted as a key activity within this intervention. The project reached a level of 30 home gardens after contracting a local specialist. However, no gardens were active at the time of the mid-term evaluation.

Next Steps/Recommendations:

1- While progress has been made to reprioritize the objectives within this large and ambitious intervention, the amount of effort being dedicated to micronutrients (as decided by the evaluation team) has not changed from the DIP. A 25% total effort is programmed with 15% of this effort going towards maintaing the goals of the breastfeeding objectives and 10% going towards iron supplementation of children. This may not be sufficient percentage effort given the complexities of executing the iron activity (please refer to recommendation number 2, below) and given that it took a 30% effort on the part of PH staff to realize the reported gains of the breastfeeding intervention.

2- The strategy for addressing anemia needs further development and evaluation. Plans in the DIP concentrate on the provision of iron supplements but there is no discussion of how the cause of the anemia will be identified (different causes require differnent interventions) nor is there discussion of how compliance will be ensured. Compliance issues surrounding iron supplements are not trivial and without good compliance blood iron levels will not be improved. It is unusual to a see a project supplement children and not mothers or pregnant women. It is recommended that the project consider outside support (MOST has already been contacted) to properly develop this intervention and that they consider seeking separate funds to manage this very worthwhile activity separately.

3- Similarly to the anemia objective, the objectives which will measure RDA consumption and the variety of the family diet are very ambitious. Measurement of RDA and diet variety will require a food frequency survey that incorporates portion sizes in order to estimate RDA. Because the survey was not completed at

the time of the mid-term KPC, development and completion can, at the earliest take place in the start of year three, leaving little time for a meaningful evaluation. As with the anemia activity, technical assistance for the food frequency survey should be sought from MOST, HKI or other sources to seek help with development of the survey and to consider alternative funding for this activity, separate from the CS project.

4- While the home garden activities have faded, the lessons learned from the experience should be shared with PVO/NGOs in Nicaragua and other Central American countries and with other PH projects. The home garden activity should not be re-attempted, unless gains in the other inteventions are first realized.

(iii) Diarrheal Disease

Objectives:

Increase from 18% to 50% the percentage of mother able to recognize the danger signs of dehydration.
Reduce from 71% to 50% the percentage of cases of diarrhea being treated with antibiotics/antidiarrheal drugs.
Increase from 3% to 20% the percentage of mothers asking the brigadistas for help when their children have diarrhea.
Increase from 45% to 60% the percentage of mothers who give their child more/equal amounts of liquid during diarrhea.
Increase from 50% to 70% the proportion of mother who continued feeding child during diarrhea.

Percent effort:

20% (DIP)

Strategy:

Project HOPE's approach to this intervention focused on the use of IMCI at the clinic level and the use of community-based IMCI and the development of community oral rehydration units (CORU) to address community level services. A total of 200 CORUs were proposed to be in-service by the end of the project. Community education was programmed to compliment clinical and community services to prevent diarrhea, prevent dehydration from diarrhea and to reduce the use of inappropriate drugs.

The improved distribution of ORS sachets to ensure their availability at the health centers and the CORUs was also proposed by Project HOPE, as was the use of messages encouraging the use of home fluids such as rice water. A total of 200 CORUs were to be developed over the life of the project.

Project HOPE proposed working with a wide variety of partners in the area including ASDI (Swiss Organization), PAHO, UNICEF and INISA (National Institute for Water and Sanitation). Materials were gathered for the MOH from all the partners and Project HOPE worked to promote the installation of latrines and other services in communities they worked by coordinating extensively with INISA.

Evaluation/observations:

1- The project reported a successful reduction in the use of antidiarrheal drugs and antibiotics to treat diarrhea. A reduction from 71% to 50% was noted which reaches the endpoint goal for the objective.

2- The other objectives for this intervention did not fare as well, 3 of 7 objectives showed negative progress. The other 3 of 7 objectives showed a slight increase of which none was found to be statistically significant. (Note: the rise in number of cases of diarrhea reported could have been due to the administration of the baseline KPC in December which is relatively dry, compared to the mid-term which was completed in June during the rainy season.)

3- ORS sachets are the focus of this intervention strategy as directed by the MOH. Shortages of ORS sachets were a common complaint by all levels of workers and community members, both at health posts and at the CORUs. When interviewed, the CORU coordinators had difficulty remembering key messages. (Both MOH and PH staff showed some confusion regarding the purpose of ORS sachets to prevent dehydration rather than to treat diarrhea.)

4- The KPC reported that of mothers with a child with diarrhea, 61% sought assistance from a community-level volunteer or higher level of service. Of these, only 1% sought assistance from the pharmacist and only 6% sought help from the brigadista, indicating that mothers are going directly to clinic level services.

5- Project HOPE completed a study, together with CSTS regarding the CORUs. They found that 65% of MOH personnel did not know the role of the brigadista/CORU coordinator and the majority of brigadistas did not understand their own role.

6- Project HOPE staff has worked with other PVOs in Nicaragua to try to improve the intervention, specifically with Save the Children and ADRA. However, they found it difficult to apply their methodologies because the Project HOPE approach of working directly with the MOH is very different than the strategies employed by others.

7- Project HOPE staff reported that some NGOs and governmental organizations providing sanitation infrastructure, did not provide hygiene messages at the time of installation. It was further noted that many of the plans made by the MOH with their water and sanitation partner, INISA, were beyond the ability of the

MOH to execute given their lack of staff. Project HOPE works with INISA to identify communities that are particularly active and willing to contribute to the building of the latrines or wells. Project HOPE has already taken steps to work better with these groups, specifically, they have convened many NGOs to discuss the upcoming educational materials initiative that PH will undertake with private funding (see BCC section) to assess NGO needs nationally.

8- A total of 200 CORUs (meets end of project objective) have been established, however the quality of the CORUs has not been assessed other than pre and post testing of the brigadistas who coordinate these centers. Materials for the CORUs were developed from information collected from expert sources, including from community based IMCI. However, the information was not clearly transmitted to the brigadistas (evidenced by a lack of understanding of any non-ORS remedies and lack of understanding of their roles). Upon review the materials (adapted from IMCI materials) were not completely readable because of poor copying.

9- As part of the midterm evaluation, the objectives for this intervention were reorganized (refer to page 33) according to priority. The objective measuring a reduction in diarrheal episodes was dropped, due to the lack of preventive activities being conducted by Project HOPE in water and sanitation; also because seasonal variations in incidence. It was felt that the remaining objectives better reflected the goal of the project for this intervention, which is to prevent mortality due to dehydration from diarrhea. The promotion of BF and personal hygiene will continue.

Next Steps/Recommendations:

1- This intervention will need to continue to undergo changes beyond the re-prioritization of the objectives, to bring about positive progress towards the stated objectives in time for the final evaluation. The percentage effort was increased from the proposed 20% to 25%. This intervention has received adequate attention during the first two years, which should allow the project to see gains in the next two years. Activities such as IMCI and especially community IMCI should continue to be key to the strategy, allowing important overlap with the PCM, EPI and NUTR interventions.

2- The focus of the intervention on ORS should be shifted to ORT and specifically to home available fluids. PH is planning to invest in analyzing and improving the logistical system to ensure that ORS sachets are always available. This activity should be reconsidered as it will be much more resource intensive than any effort required to improve the use of home available fluids.

3- Project HOPE staff needs to shift evaluation of trainings to the level of service provision, with a better definition af the role of CORU manager. For example, mothers whose children have been identified as having an episode of diarrhea in the recent past could be interviewed to see if messages about ORT, danger signs, and prevention of dehydration are reaching them and to understand where they

got this information. Interviews of the brigadistas could also be conducted to understand what they have retained from training at some interval post-training. This is not to suggest that pre- and post-testing of the training participants is not necessary, it is and it has been appropriately implemented by Project HOPE. Interviews of this type could be conducted between trainings and between KPC surveys to monitor the progress of the intervention as well as checklists during supervisions.

4- The CORUs are an important part of the overall strategy for this intervention, however this should not be the only mechanism for delivering services to communities as even with 200 CORUs a small proportion of total communities will be served. As part of the overall strategy, Project HOPE and the MOH should look to the brigadistas to give community education within their community and beyond, at local events, churches, etc.

5- As mentioned, some partners are providing infrastructure without giving hygiene messages. This is a good opportunity for PH to increase its collaboration with local partners, teaching about the need for hygiene education, and look for ways to deliver messages to the communities receiving latrines, thus utilizing their skills as needed to complement their partner's skills.

6- While Project HOPE staff in Nicaragua should be commended for working cooperatively with local PVO partners, they need not be discouraged by that, they have not found these interactions to be especially useful. Project staff should be encouraged to find elements of the successful methodologies that they witnesses with ADRA and Save the Children that can be implemented, rather than focusing on the differences that exist amongst the groups. Conversely, they should be helped to look beyond their resources in Nicaragua to interact with PVOs throughout Latin America, and perhaps more importantly, to learn from other Project HOPE offices internationally, who employ the same key strategies.

(iv) Pneumonia Case Management

Objectives:

Increase from 2% to 10% the proportion of mothers recognizing chest in-drawing as a danger sign.
Increase from 45% to 80% the proportion of mothers able to recognize fast breathing as a danger sign of pneumonia.
Increase to 80% the proportion of pneumonia cases treated according to IMCI protocols.

Percent effort:

20% (DIP)

Strategy:

Project HOPE planned to use a combined IMCI and community-based IMCI, including community-based pharmacies, to address this intervention. The clinical level of IMCI would serve to improve and standardize services provided by the MOH at the health facilities level and strengthen counseling. Community-based IMCI would serve to train community volunteers to dispense antibiotics and would train the volunteers and mothers to recognize the signs of a child in need of antibiotic treatment. Radio messages were programmed to deliver key information to the broadest audience.

Community pharmacies and donation of antibiotics to the MOH were proposed to improve access of families to the needed treatment. Project HOPE conducted focus groups prior to completing the DIP which found that rural mothers could travel as much as 4 to 6 hours to reach a facility and could spend a significant amount of money on the treatment. The focus groups also revealed that antibiotics were likely being over prescribed.

Follow-up of patients was proposed. A treatment was considered successful if, in the reassessment visit the child did not display a danger sign.

Evaluation/observations:

1- The number of women who were able to recognize fast breathing as a danger sign of pneumonia increased as needed to reach the end of project goal for this objective.

2- While there was a 100% increase in the number of women recognizing chest in-drawing, the confidence intervals show significant overlap in the baseline and mid-term values.

3- The third objective of the intervention relies on the completion of either focus groups, a review of records at the facility level, or the completion of an HFA survey. This was not completed and for this reason, no data is available for this objective.

4- While community IMCI was a key strategy for this intervention, the MOH has not yet approved a curriculum for the community-level work, and therefore, PH has not begun implementation of this aspect of the intervention. However, PH does have many community IMCI materials and has appropriately incorporated these into training and educational materials.

5- Clinical IMCI training has taken place and being fully supported by PH. Other than pre and post-testing of IMCI participants PH has not evaluated the success of IMCI. This includes follow-up of patients, which is not systematically done by PH. (Note: It is possible that the MOH is performing follow-up of children with pneumonia or otherwise treated by IMCI, however, data regarding this activity was not available during the mid-term evaluation and is not collected by PH.)

6- Lack of medicines of all types was the number one complaint of all health personnel and community members in almost every interview conducted by the mid-term evaluation team. Establishment of the community pharmacies will theoretically improve access of the pneumonia treatment however, if the MOH is having trouble stocking the clinics there is no reason to think that the pharmacies will fare better, unless sources are different.

7- The mid-term evaluation team had the opportunity to meet with many volunteers who were managing community pharmacies. There were a wide variety of models in place, from purely private/community driven pharmacies (received no outside donation to establish the pharmacy and replenish stocks from private pharmacies rather than the MOH) to newly established pharmacies that were started with a donated kit. Some of the pharmacies (2) were started specifically by PH and the MOH, others were established by communities, other NGOs and other groups.

Next Steps/Recommendations:

1- While community based IMCI has not been approved, the project should continue to seek innovative ways to incorporate elements of the training materials into their activities. The project could also look for ways to use community IMCI in its entirety in one or a few municipalities, as a pilot test, which would provide the MOH with valuable information about the methodology.

2- An HFA survey which evaluates facilities to the level of the community pharmacy and evaluates the skills of all workers, including volunteers should be implemented. It would add a great deal to incorporate a customer needs assessment into the survey if this is not already available as part of the community IMCI materials. (See also Next Steps, Immunizations.) Completing the HFA would serve as a first step to examining the issues that plague the distribution of all essential drugs from the central depot to the rural outposts.

3- Evaluation of the IMCI trainings should be expanded beyond simple pre- and post-trainings as discussed in Next Steps, Diarrheal Disease, by using supervision checklists.

4- The results of the KPC are mixed. It is not possible to say that the messages being transmitted to the mothers/caretakers are being received and internalized, because the objectives do not show a clearly positive trend. While improved evaluation of the trainings, as recommended in number 3, above, is one aspect to better coverage, another is to revise and improve IEC materials including the radio advertisements that were initially planned. (Please refer to section B.2b.Cross-Cutting Approaches, Communication for Behavior Change for further details.)

5- The project has established 2 community pharmacies and many more exist in the project area. Current pharmacies should be evaluated to determine "Best

Practices" of the successful establishments. Examination of what factors have been necessary in fostering the successful pharmacies and what factors have lead to the in ability of others to sustain themselves is useful to PH, the MOH and others. It was clear that many good examples of success stories exist within the project area. In one rural community, the members had collected funds to establish the initial kit without a donation, a relationship was then established with a private pharmacy to provide drugs at a reduced rate. The drugs were then always sold above cost in the community to maintain the kit stock. This community pharmacy reported no stock-outs in over 5 years of operation, and was the only facility interviewed without a stock-out of any kind during the evaluation.

In addition to understanding what is necessary for a pharmacy to succeed or fail, the project could use this information to develop selection criteria for future communities wishing to receive starter kits. The idea of developing a model pharmacy with specific community criteria should help staff to understand the ideal that they need to be working towards so there is a goal in mind when a pharmacy is established.

6- The mid-term evaluation team agreed to give more emphasis to this intervention in the remaining two years of the project. The strategy will continue to combine IMCI and community-based IMCI. It is recommended that an HFA survey be completed to complement these strategies and that supervision and monitoring be improved (please refer to number 2 and 3, above).

(v) Maternal and Newborn Care

Objectives:

Increase from 25 to 50% the proportion of mothers retaining thie HCPB (health card). Increase from 82% to 90% the proportion of pregnant women with at least two prenatal visits.
Increase from 56% to 70% the percentage of mothers not desiring a pregnancy in the next two years using modern family planning methods.
Reduce from 42% to 20% the percentage of mothers found pregnant who are adolescents.
Increase from 24% to 40% the proportion of mothers with at least one postnatal visit.
Increase from 40% to 60% the proportion of mother with at least 2 dose of TT.
Increase to 90% the proportion of mothers using iron supplements during the last pregnancy.
Increase to 80% the number of women using VA one month post-partum.

Percent effort:

30% (DIP)

Strategy:

The project DIP proposed activities based on the results of the KPC survey and focus group discussions with community women. Focus group discussions included questions about the quality of health services expected by the women.

The focus of this intervention was to strengthen the technical quality of the health facility services and management, as well as to foster inter-sectoral collaboration. The main activities planned included: 1) assist the MOH with the supply of prenatal care cards, 2) improve the quality of service delivery, including improving TBA training, 3) provide education to mothers during their contacts with health providers and through mass media, 4) provide targeted, specialized counseling to adolescents, 5) establish youth groups to further tackle the problem of adolescent pregnancies, 6) improve monitoring and supervision and IEC, 7) provide micronutrient supplementation.

Evaluation/observations:

1- While the levels of coverage for the objectives are moving in a positive direction, toward the stated goal, in general there is little progress across the board for this intervention. The reduction in adolescent pregnancies being reported seems to be significant at first, however, closer examination reveals that the number of pregnancies (subset of all women interveiwed) is very small, leading to a very large confidence interval. There is significant overlap of confidence intervals for the other objectives as well.

2- The formation of adolescent groups was conceived as an interesting and innovative idea. It is an idea that has a high potential to deal with a very high risk group. These groups (see annexes) were formed a few months prior to the mid-term evaluation. Interviews with the groups revealed that the problems faced by these adolescents, while inclusive of pregnancy, were much broader than what PH was able to manage. The primary interest of the groups was putting together athletic teams to generate after-school activities and issues related to preserving their environment.

3- Interviews with TBAs revealed a high level of knowledge by the volunteers but a consistent lack of supplies. The recent withdrawl of FORSAP funds (Please refer to Interventions, evaluation/observation section for additional information) had specifically lead to the MOH's withdrawl of a reporting form. TBAs were informed that without the donated funds to copy the forms, they would no longer receive the forms. All TBAs interviewed reported shortages of alcohol, gloves, etc. TBAs have not been given vitamin A to distribute post-partum.

4- As was the case with the community pharmacies, there were a wide range of examples of community support for the TBAs. In a very few cases, the community helped to stock the TBA with supplies and paid her in-kind. Most TBAs did not receive community support and made themselves available to the poorest women in their communities. The TBAs felt that many women were using formal health services, which was supported by the KPC data below.

5- KPC data indicates that 86% of women sought pre-natal care at a health center, 53% gave birth at a health facility, 30% were attended to by a TBA and 16% were assisted by a family member.

Next Steps/Recommendations:

1- Project HOPE should be applauded to being innovative and trying to capture at-risk young women in a peer setting to reduce pregnancies. PH has identified an area which needs attention. The high rate of teen pregnancies continues to be a problem for Nicaragua and should be addressed within Chontales. However, continuation of this activity should be re-assessed within the context of the goals of the overall project. The adolescent groups have only been in operation for a short while, and it will take a great deal of effort to move these emerging groups into successful vehicles for transmitting family planning and health messages. PH should look for ways to partner with other organizations that work with adolescents, advocates for youth, or work with the MOH to encourge the problem be recognized and dealt with. Finally, alternative sources of funding could be sought that would allow for the program to grow outside of the CS project; allowing expansion of the topics delivered to the groups and may provide greater flexiblity to meet the needs of the teenagers.

2- The role of the TBA in the community and the project should be reassessed. If, in fact women are accessing and favor health facilities, perhaps greater emphasis and resources should be place on this level of service. However, if the TBAs continue to serve women who are at greatest risk (lower SES, higher rates of malnutrition, etc.) their role may be very important, albiet specialized. An in-depth qualitative survey should be conducted to determine the proper role of the project in supporting the future of the TBAs.

3- Project HOPE should look for ways to develop community support of the TBAs which is more sustainable than improving MOH supervision of these workers. Positive examples of how a community can support their TBA exist within the project area and should be studied in a manner similar to the community pharmacies. In addition, PH should specifically work with the MOH to assist them to directly evaluate and develop new strategies, especially in their environment of variable funding. The fact that the MOH stops using a form simply because funding is withdrawn, indicates that they are not evaualuting the value of the form itself. Further discussion of assisting the MOH to manage donors is found in the Immunization and Diarrheal Case Mangement sections.

4- The DIP proposed the Maternal and Newborn Care intervention would be allotted 30% effort. In light of the need that other interventions have been prioritized above this intervention, the MNC intervention has been reduced to 15% by the mid-term evaluation team. Corresponding reductions in activities will need to take place. It is recommended that community and clinical IMCI continue (allowing overlap with the DCM and PCM interventions), as would activities with

TBAs. The decrease in effort would result from cesation of adolescent specific activities and neither initiating family planning nor supplementation activities (see Nutrition section for greater detail) until the quality and effectiveness of IMCI and TBA training could be ensured.

c. New Tools and Approaches

Project HOPE has developed several strategies that it utilizes within the CS project that are both innovative and could be shared with other PVOs. First, the overall approach of working directly with the MOH to improve their capacity is something that PH has taken lead with in the PVO community. PH currently has at least three projects (2-CS, 1-CHAPS/Malawi) that utilize this approach. The opportunity to consolidate lessons learned and best practices and distribute them through CS channels such as CORE and CSTS will be of great benefit to the CS community. PH is planning to do this in the coming two years of the project.

Additionally, PH has secured funds from Glaxo-Wellcome to develop BCC materials for Nicaragua that will also be adapted around Latin America, Africa and Central Asia. PH is taking advantage of this opportunity to develop materials with leading expert groups such as BASICS, CHANGE, UNICEF, etc. The strategy also includes learning from existing, successful materials developed by local and international NGOs. PH will make the final materials available to a wide variety of organizations working in the are of maternal and child health.

Information about other new tools and approaches was included in each intervention section.

2. *Cross-cutting Approaches*

a. Community Mobilization

Community mobilization was a key component of this CS project as proposed by PH in the DIP. As defined by PH, community mobilization includes:

1- Increased customer demand for health services. Project HOPE proposed to increase demand by improving the quality of health services through the use of IMCI and improving procurement of supplies. At the community-level, PH proposed extensive use of mass media to deliver health messages.

2- Increased community participation in choosing and delivering health services. Project HOPE conducted a variety of surveys and focus groups to determine customer needs prior to completion of the DIP. Based on this information PH proposed the promotion of community support groups including those for breastfeeding mothers and adolescents. In addition, PH proposed promoting greater access and control of health services at the community-level through community pharmacies and CORUs.

Evaluation/observations:

Project HOPE is fortunate to be working in an area where strong cultural and (past) political incentives exist that bring communities together to solve problems and demand services. During the Sandinista regimes, community participation, specifically, in health was actively promoted. While there was never uniform participation, the existance of these systems has prepared some communities to work cooperatively. (This is not to imply that Project HOPE can expect community participation to occur spontaneously on every occasion, simply that some of the typical barriers experienced to community organization may be lower here in Nicaragua.)

Project HOPE has correctly identified how to improve demand for services, however, at the time of the mid-term key activities such as community surveys and focus groups had not yet been completed. PH was specifically asked by the MOH not to complete the radio broadcast of health messages, as FORSAP funding was made available for this purpose.

Next Steps/Recommendations:

Project HOPE should take advantage of completing the recommended HFA survey and should use this opportunity to incorporate a strong customer needs componènts. A survey of this type could collect data on the quality of services from the perspective of the community (wait times, attitudes of providers, satisfaction with facility, etc.) which will enrich the information collected by the HFA (including observational studies of providers and inventory assessment). Additionally, PH should increase the use of mass media in the second half of the project as FORSAP funds are ending.

Messages developed for radio and other media should be field tested prior to airing and the improvements recommended in a report ("Final Report regarding Knowledge, Practice and Quality of Radio Programs Targeted to Women over 14" MOH/PH, 1999.) should be implemented. PH CS staff should also take advantage of the educational materials to improve home management being developed by HQ with Glaxo-Wellcome funding (see BCC section below) to either use key messages from this initiative or to learn to implement the same methodologies used by these expert groups.

With regard to support groups, PH should reconsider continuation of the adolescent groups that are only recently established and should continue to dedicate time to the successful groups such as breastfeeding support.

Excellent examples of successful community pharmacies and CORUs exist within the project area. A survey of these "Best Practices" should be completed to benefit the development of future units. An excellent mechanism for promoting the attributes of the best units would be to develop a model pharmacy and CORU, which could guide staff and communities to the ideal performance level expected at each community (please refer to sections DCM and PCM for greater detail).

b. Communication for Behavior Change (BCC)

Project HOPE programmed BCC activities for every intervention. Essentially, this activity consisted of: 1) developing new messages and monitoring acceptance of messages with the MOH, 2) transmitting key messages over the radio, and 3) transmitting key messages through community-level education, including support groups.

Evaluation/observations:

Project HOPE, in most cases, utilized existing BCC materials from expert organizations such as UNICEF and MOST. Given the number of NGOs working in the area, this was an intelligent strategy and avoided duplication of effort. PH was also able to deliver messages as programmed through community groups and educational interactive educational sessions. The BCC presented in the DIP was unclear, which lead to confusion over expectations at the field level.

Evaluation of the BCC materials was usually done at the level of the trainings, and was not followed to the community level to assess effectiveness. Interviews with brigadistas and community members revealed a low level of understanding of key messages transmitted, which is consistent with the DIP. In addition, some materials were found to be hard-to-read due to excessive photocopying. All materials were developed in the appropriate language (Spanish) and were adapted as needed for illiterate populations.

Project HOPE has recently been granted funding from a private source, Glaxo-Wellcome, to develop educational materials for caretakers. The materials will be developed in Nicaragua with PH field staff, and will be adapted in the future in four additional countries for adaptation and use. The effort will be coordinated by PH HQ staff, and will be a collaborative effort with BASICS, CHANGE, PAHO, MCH, and other expert groups.

Next Steps/Recommendations:

A key to improving the BCC intervention will be to evaluate impact at the community level to verify key messages are understood by the target audience, to monitor this intervention more frequently through focus groups, exit interviews from a health services visit, or other similar methods, and to improve the quality of existing materials.

A first step should be for Project HOPE to review all health messages with HQ and consultants available to CS programs through USAID, such as BASICS, CSTS, MOST, etc. A plan for improving materials should then be developed which takes into account the new hierarchy of the interventions based on the reprioritization that took place during the mid-term evaluation.

As PH develops new educational materials for Nicaragua, every opportunity to participate with the Chontales field staff, including MOH should be capitalized upon. Staff will learn about the complicated process of developing and field

testing messages and materials and how an on-going monitoring system can improve quality.

c. Capacity Building Approach

Objectives and Indicators:

SILAIS and other partners attending regular sessions of the department/district health committee, doing and annual plan, follow-up for adjustments every quarter.
IMCI norms implemented.
Health information system used in the process of decision -making.
Mechanism as incentives to volunteers developed.
A community-based way to distribute drugs with a cost recovery for those able to pay.
MOH and other partners involved in qualitative and epidemiological assessment of the impact of their activities on health/nutrition.

Evaluation/observations:

(i) Strengthening the PVO Organization.

The vast majority of Project HOPE activities have focused on strengthening the primary partner, the MOH. This approach is consistent with PH's goal to increase the capacity of the MOH to deliver child survival interventions in a sustainable manner. However, PH should look for ways to maintain and continually improve the skills of their own staff, in large part, so that they continue to serve as a resource for the MOH. Keeping current regarding the state-of-the-art is of particular need to the field staff, assessing their training needs continuously. Mechanisms for achieving this could include improving access to and knowledge of the World Wide Web, and more direct and frequent access with the PH HQ, CSTS and other expert organizations, NGO networks in Nicaragua. Exchanges with HOPE offices in other LA countries –such Guatemala, with expertise managing revolving drug funds- should be promoted.

Objective 3, Health information system used in the process of decision-making. This objective could best measure the future progress of the capacity of PH staff. Activities, which are planned on a quarterly basis, should be decided upon using HIS data and other data that is available. The staff should also learn to identify when the use qualitative and other methods for data collection is appropriate, when the data is insufficient for making a final decision. Documentation of this greater critical evaluation of all activities planned should be accompanied by a focus on results, ensuring that any activity implemented can directly be linked to a project objective and thus to the overall goals of the program.

(ii) Strengthening Local Partner Organizations.

Project HOPE has worked closely and collaboratively with the MOH. The staff is well integrated within the quarterly and yearly planning process. PH needs to

build upon this excellent rapport, strengthening the official partnership they have with the MOH, to increase accountability by the MOH. For example, any training provided to the MOH should come with an assurance by the MOH that follow-up supervision and monitoring will take place to ensure the trainings are utilized. PH should further ensure that they can develop a mechanism for verifying that the follow-up was completed as agreed by the partners.

In addition, PH should be very critical in their evaluation of requests from the MOH to do activities in any given quarter. To date the project has approved the vast majority of requests from the MOH, which generally focus on trainings, provision of materials and/or medications, and use of vehicles. PH needs to assess whether these activities will improve the capacity of the MOH or simply substitute Hope resources for those lacking by the MOH. Activities which help the MOH to function under their own limited resources should lead to greater sustainability, and should take priority over less sustainable activities. Clarifying and reassessing the partnership agreement would be a first step to shifting the focus from trainings to capacity building.

Objective 6, MOH and other partners involved in qualitative and epidemiological assessment of the impact of their activities on health/nutrition best measures progress of the capacity of the MOH to assess their own programs. To date, the MOH is only peripherally involved in the KPC conducted by PH. The municipalities interested in using the KPC have done so apart from PH. Greater integration could be realized with these activities, or PH could look to assess what surveys or information systems may be better suited to meet the monitoring and evaluation needs of the MOH. The key would be to assist the MOH to implement the survey and conduct the analysis and to work with them through the process of utilizing this information to make managerial decisions. Increase the effort in Quality Improvement methods.

Working with communities to implement community pharmacies, as stipulated in objective 5 (A community-based way to distribute drugs with a cost recovery for those able to pay) also assists the MOH to realize its health programming goals and certainly assists with PH and the MOH's sustainability goals. As recommended in section B.1. PCM, a review of the traits needed to ensure a successful pharmacy versus those conditions existing leading to unsuccessful pharmacies should be assessed and documented to develop criteria for future pharmacies and/or to develop a model for the ideal pharmacy.

(iii) Health Facilities Strengthening.

Many activities have been realized to improve services at the facilities level. These include trainings, especially in IMCI, and provision of drugs. Objective 2, IMCI norms implemented is specifically designed to monitor improvements to the capacity of the facilities. The MOH is utilizing IMCI norms in almost all facilities, indicating significant progress towards this objective. Further

evaluation and monitoring of the quality of said trainings could be realized with the recommended HFA survey.

(iv) Strengthening Health Worker Performance.

The trainings provided by PH have been directly aimed at improving health worker performance at the community and facilities level. While it has been recommended that evaluation of these trainings be improved, the trainings have been completed as scheduled and have laid an important groundwork for the realization of gains in the second half of the project.

Objective 4 (mechanism as incentives to volunteers developed), has not been implemented but is programmed for the following two years. Development of appropriate mechanisms should be thoroughly evaluated based on the current system and based on the MOH's long-term needs.

(v) Training.

Project HOPE's primary objective has been to improve the capacity of the MOH. To this end, the PH programmed an extensive training schedule, focusing on the training of MOH personnel in IMCI (which to this point has been limited to clinic level IMCI), and training of community members to form breast-feeding support groups, to form and maintain CORUs and to establish community pharmacies. As noted in other sections, the primary weakness observed has been the lack of systematic evaluation at the community level (interviews of mothers, etc), which is the level at which PH wants to view a change in behavior and practice.

Next Steps/Recommendations:

1. Project HOPE should review the capacity building objectives with project staff and clarify/reassess indicators as needed to be sure that all staff is in agreement of goals. Clear and simple benchmarks (as those used in the Sustainability Section of the DIP) would assist the staff to better manage activities related to the objectives. In addition, PH should incorporate questions that respond to the capacity building objectives in the final KPC or in the recommended HFA to collect objective data measuring the progress of this intervention.

d. Sustainability Strategy

Project HOPE has implemented a highly sustainable strategy for delivering health services in Chontales. Rather than implement child survival activities, PH is working with the MOH to improve their capacity to manage personnel and resources in Chontales to deliver high quality interventions.

Objectives and Indicators:

Objectives	Benchmarks	Strategies
Department level		

1) Strengthen Department Health Council 2) Strengthen Replicating Education Committee (REC) 3) Extension of project activities by NGO counterparts	1) Department Health Council by comprising public and private organizations working in health 2) REC participating in follow-up, monitoring, and supervision 3) NGO counterparts extending project activities	- Promote coordination - Organize annual planning and quarterly meetings for adjustments - Involve other public and private agencies related to health - Provide technical assistance to MOH and counterparts

Sustainability Objectives and Indicators (cont.):

Objectives	Benchmarks	Strategies
Municipal level		
1) Train MOH master trainers to train counterpart staff and volunteers in CS interventions 2) Train counterpart agency staff in CS interventions, using adult education techniques 3) Strengthen monitoring, follow- up and supervision plans for counterpart staff and volunteers 4) Unified HIS for planning and decision-making	1) 25 master trainers – mostly nurses- 2) 75 FONIF staff trained in nutrition education, 3) one supervision plan 4) one integrated, functional HIS 5) 300 municipal committee members trained in development resources	- Motivate participation of municipal health council in project activities - Conduct identification of training needs - Provide educational materials to masters trainers - Encourage inter-institutional coordination - Help in the development of tools to assess quality of services
Community level		
1) Train volunteers (brigadistas and TBAs) in CS interventions 2) Basic health services provided in integral visits to rural communities 3) Volunteers promote CS education in communities 4) Rural schools providing nutrition education through gardens 5) Improve access to basic drugs	1) 200 brigadistas and 200 TBAs trained 2) 2-3 integrated visits/year made to 50 isolated, rural communities 3) 100 rural school teachers trained in gardens, nutrition, food hygiene and reproductive health 50 New gardens / year 4) 50 community pharmacies	- Counterpart personnel provide community-level training - Follow-up and evaluation of volunteer activities - Brigadistas and TBAs providing health education, basic care and promotion to community members.

Evaluation/observations:

Departmental level. At this level PH has made positive progress towards these objectives. While not listed as an objective, the DIP stated that PH would assist the MOH to improve its capacity to work with outside donors and technical partners. This has not occurred, but is programmed into the final two years of the project.

Municipal level. The majority of PH's work has been appropriately directed to the municipal level of the MOH. As the Nicaraguan government decentralizes, it is anticipated that more decisions will be made at this local level. Progress toward the municipal level objectives, therefore have been significant, with much better integration al coordination at this level. PH still needs to work with the HIS system to ensure that the MOH is utilizing data which is collected and feed back to communities.

Community level. PH has made progress with all of the community level objectives and should meet all of the stated objectives by the end of the program. Interviews with community members revealed that while objectives are being met, messages are not always reaching the target population.

Next Steps/Recommendations:

1. Project HOPE is attempting a strategy which is highly sustainable, but which is more demanding than a standard CS project. PH should document "lessons learned" from the experience to share with the larger PVO CS community. As the project develops, greater communication between this project and others managed by PH which implement similar strategies (CHAPS/Malawi, CS/Guatemala, etc.) should be realized.

2. While not a specific objective, if PH could work with the district or municipal level MOH to better manage donors and technical partners they would be able to realize a significant contribution to improving the capacity of these entities. Specifically, PH should work with the MOH to teach them to assess their needs using data and teach them to discern which strategies would be most cost-effective and yield the highest impact given their particular circumstances. PH should then work with the MOH to organize this information into formal proposals to be presented to donors.

C. Program Management

1. PLANNING.

Project HOPE has a satisfactory system in place to manage the activities of the field staff from the national HQ in Managua, however this system was not fully utilized by the previous Program Manager and this is likely partially responsible for a lack of progress towards objectives. In addition, other than the KPC, PH has no mechanism for monitoring the objectives at the community-level. To remedy this, PH should consider the use of lot quality assessments and/or qualitative research methods to monitor progress in between KPC

surveys. This would allow the project staff to adjust intervention strategies to maximize impact. (It should be noted that the current Project Manager has experience with lot quality assessments and was interested in implementing this management tool, if resources permit. Options for containing the price of this activity, such as reducing the lots assessed, and involve the MOH with cost sharing should be considered.)

Groups involved in planning include the MOH and all partners. The annual workplan is presented section G of this report. All objectives have been reviewed and shown in their re-prioritized order following exercises completed during the mid-term evaluation. Following submission of the evaluation report, all parties will be given a copy of the report and final workplan.

2. STAFF TRAINING.

As mention in section B2.c.Capacity Building, staff training has been minimized in favor of an emphasis for trainings to the MOH personnel. While this is appropriate given the goals of the project, it is still necessary for the project staff to maintain their skill levels above those of the MOH, in order to serve as a technical resource to the Ministry. It would further be appropriate for PH to formally evaluate staff to assess current technical needs. A system of continual improvement could then be implemented. This would likely demand an increase in overall resources allocated to staff.

3. SUPERVISION OF PROGRAM STAFF.

Staff is primarily managed according to quarterly action plans that are developed with the MOH. While this system is adequate, improvements are warranted given the lack of overall project progress towards objectives. First, the quarterly action plans need to be developed and approved with more critical review as to which activities are directly linked to objectives and goals. Activities that can not be linked to a specific objective should not be approved. Second, the staff should meet regularly to discuss progress as a team or individually with the Program Manger (as is the case currently). This step should be accompanied by outside support from HQ or others as need. The latter was not done during the term of the previous Program Manager but is likely to happen under the direction of the new PM who is eager to access all available resources. Lastly the staff needs to be evaluated based on results. This will improve if lot quality assessment and/or qualitative evaluations are added to project activities as recommended. Any of these steps can be done in a manner that is both participatory and allows the staff to evaluate themselves, which will maximize their use as management tools.

Supervision of MOH personnel is a key component of the CS Project. Supervision to date has been done on an as-needed basis when requested by the MOH. Generally the visits have been performed in a joint fashion by an MOH and PH staff member. These visits could be improved by implementing supervisory checklists and standardizing the events that need to take place in a given visit. In addition, PH needs to ensure that a specific mechanism exists for improving the MOH's supervisory system. This may include an official mechanism for making recommendations and holding the MOH accountable for acting on some agreed upon

aspect(s) of the recommendations. Clearly balancing accountability with PH's strong relationship with the MOH is crucial and, to this end, the terms of these mechanisms need to be accepted by the MOH and incorporate self-evaluation to the extent it is feasible.

4. HUMAN RESOURCES AND STAFF MANAGEMENT.

The project staff of Project HOPE is very competent and has great potential to achieve greater results in the second half of this program. There has been little turnover of staff reflecting PH's level of commitment to and sound management of personnel. All standard policies, job descriptions, and procedure manuals are in place for staff to follow. Staff is almost uniformly taking higher level courses to advance their current curriculums. While the latter is not an official policy of PH, their ability to access these classes reflects PH's flexibility; this will assist with the transition to other jobs once the program has ended, although no specific strategy for managing this event exists.

5. FINANCIAL MANAGEMENT.

Project HOPE has managed funds appropriately as programmed in the first two years of the project. Total spending was $545, 198 at the time of the evaluation that is almost exactly the amount of funds that should have been spent to date. Over expenditures have come in the area of vehicle expenditures (fuel, maintenance etc.) and in the category of training. The latter line item was 80% spent at the time of the evaluation. PH has taken these over expenditures into account and has adjusted the budget accordingly. Partners working with PH are not directly managing funds, for this reason no discussion of their ability to handle expenses is included.

6. LOGISTICS.

The lack of medications and supplies at health facilities was a uniform complaint during the mid-term evaluation. The lack of these goods seems to be due to logistical problems rather than a lack of medications and supplies in the country. According to PH staff, goods are in stock at central sites. They are simply not distributed to outlying areas, and once reaching the municipality, there are further complications in getting the goods to the lowest level and most remote facilities, such as health posts (this is not an uncommon occurrence in developing countries). PH has committed to improve the logistics system used by the MOH. A first step could be the recommended HFA survey, results of which can be shared with the MOH – Central level- to begin the assessment of the system. PH must critically evaluate what next steps will be taken after the HFA is completed. It is highly recommended that PH explore alternatives to the current logistical system (utilization of private drug systems for example) when it is deciding how to allocate resources in the final two years of the project to improve distribution systems. The amount of time and money needed to improve the existing system in a sustainable manner is likely to very high and examination of alternatives may provide low-cost alternatives that would be more realistic to implement in the short time remaining.

7. INFORMATION MANAGEMENT.

PH uses many assessments to collect data for the project. The project used KPC and focus group information to develop the DIP. In addition, the program completed an assessment of its radio programs and partnered with CSTS to complete a qualitative assessment of community volunteers in the municipality of Nueva Guinea. This report was included as an annex in the first annual report. In addition, the project collects data from existing MOH records, such as clinic records, maternal and child health cards, etc.

This system is adequate but can be improved. Recommendations included in other sections of this report include:

1. Incorporation of Lot Quality Assessments and/or more qualitative data collection to monitor progress at the community-level towards objectives between KPC surveys.
2. Increase feedback of current data collection to communities.
3. Improve accountability by the MOH to act on data collected, by enhancing the current partnership agreement.

8. TECHNICAL AND ADMINISTRATIVE SUPPORT.

The project has received extensive technical and administrative visits in the past two years. Visits include 6 visits by HQ (Jack Blanks, Bob Grabman, and Luis Benavente), 1 visit from CSTS and USAID (Ann Hershey, Sandra Bertoli) and 2 visits by external technical consultants. As noted previously, external TA was not accessed by the Project Manager or its staff in the first two years, with the exception of these visits. This problem has been addressed and the new PM has been selected in large part because of his willingness to communicate with HQ and other sources of support. If this additional TA is accessed as expected, there will not be a need to maintain the heavy visit level that was realized in the first two years.

D. Other Issues Identified by the Team

No issues outside of the realm of the DIP or the mid-term evaluation were identified by the evaluation team.

E. Conclusions and Key Recommendations.

Please note that intervention specific recommendations are provided under section B.1. Technical Approaches by Intervention. This section summarized the key recommendations made in the intervention section and throughout the report to synthesize the overall needs of the project as it moves into its second half of programming.

1. Re-prioritize interventions and select key objectives within each intervention: A lack of focus and clear strategy for managing the five interventions has clearly been a key contributor to the lack of progress seen towards the objectives. As part of the evaluation process, the percentage effort allocated to each intervention was revised. An important consideration was the fact that it

was estimated by PH that the gains realized to the breast-feeding objectives (one component of the nutrition intervention) required an estimated 30% of their time and effort. Also considered was the level of work completed in the first two years towards each objective and the level of overlap between intervention strategies (IMCI, for example, is a central cross-cutting activity). Beyond re-prioritization, the project should not attempt to continue to work on all interventions at once, rather they should begin to focus almost exclusively on the highest priority interventions and should ensure they are well established before launching into major activities of the other interventions. The rationale for the change in percent effort is discussed in the recommendation of each intervention. The new order of each objective within the specified intervention is displayed below.

Re-prioritization of Interventions Based on Mid-Term Evaluation

Intervention Rank-DIP	Intervention Rank-Mid-Term
1. Maternal and Newborn Care-30%	1. Control of Diarrheal Disease- 25%
2. Nutrition and Micronutrients- 25%	2. Pneumonia Case Management -25%
3. Control of Diarrheal Disease- 20%	3. Nutrition and Micronutrients -25%
4. Pneumonia Case Management- 20%	4. Maternal and Newborn Care- 15%
5. Immunization- 5%	5. Immunizations - 10%

2. Focus on results rather than activities. The project was successful in implementing a wide variety of trainings and activities supporting each of the CS interventions. However, results (as illustrated by interview responses and KPC outcomes) were not consistent with the level of effort expended at the activity level. Because PH was appropriately monitoring the quality of the trainings at the time they were provided, the recommendation is to move beyond monitoring at the time a training is completed. PH should evaluate the quality of trainings or any other activity at the level where the impact should be seen. For example, when mothers and CORU coordinators were interviewed about home-based fluids, few could explain how or why they should be prepared. While PH staff included information about home-based fluids in the training, it was clear that retention by the brigadistas and subsequent transmission to the community was not taking place. Staff concurred that a greater emphasis was placed on ORS over home-available fluids (a recommendation to place a greater emphasis on home-available fluids was made in section B.1. Technical Approach, (iii) Diarrhea). Periodic interviews at the community level would help the project to monitor the quality of the training and will help to measure progress towards objectives between KPC surveys. This could be done through the use of lot quality assessments (utilizing KPC questions) or with qualitative methods.

3. Remain focused on the goal of improving the capacity of the MOH, rather than providing less sustainable means of support. As noted throughout this report, PH's strategy to improve the capacity of the MOH is potentially highly sustainable. However, the project needs to remain focused on this concept and not provide the types of assistance that are not consistent with this goal. For example, during supervisory visits, PH staff were often asked to participate in order to make a vehicle available to the MOH. While the dual supervisory visits allowed PH to make

recommendations for improving the visits, no mechanism for ensuring the recommendations would be utilized exists. To be more consistent with the aim of capacity building, PH could, in this example, help the MOH to develop supervisory checklists and establish key criteria for a good supervisory visit. PH could then monitor use of the checklists and report this information back to the MOH. Alternatively, PH could help the MOH to evaluate their supervisory schedule based on the number of vehicles and staff that they have on-hand and assist them to plan within their given resources. As the system currently operates, the MOH is planning beyond their means and then they simply make requests to NGOs and donors to meet their objectives. When outside assistance is not available, the system breaks down and in this case, the supervisory visits programmed do not take place.

Another key example is the impending departure of FORSAP, a major donor in the Department of Chontales. It was clear throughout the mid-term evaluation that FORSAP and the MOH had not developed an exit strategy for the $1 million per year funding currently being received. It was also clear the MOH was expecting to find outside sources to replace the gap in funding, and that they were primarily looking to PH to be that outside source. PH has a great opportunity here to work with the MOH to help them manage their new level of funding. It would be appropriate for PH to bring in outside support, such as a PAHO consultant that is familiar with departmental planning, to assist with this activity. By working with the MOH to assist them to program in a more cost-effective manner, with the greatest focus on the highest impact interventions, PH could make significant gains to improving the capacity of the MOH.

Further, PH needs to re-evaluate how the MOH makes requests and how they respond to these requests, again, to be consistent with this key strategy. During the evaluation, it was clear that most requests made by the MOH were approved by PH, without critical evaluation or collection of data, joint planning with stakeholders. The process of providing any service or supplies to the MOH, should include a mechanism for holding the MOH accountable for a corresponding measurable result that is directly linked to a stated objective. To this end, PH may need to revise the current agreement that they have with the MOH to strengthen accountability.

4. Identify "Best Practices" and capitalize on these successes. Many excellent examples of successful intervention activities and community participation were examined during the mid-term evaluation. These "Best Practices" should not just be documented and shared with others, but PH has the opportunity to begin to use these model examples within the project immediately. The best examples of this are the breast-feeding objectives and community pharmacies. The key factors leading to successful completion of the BF objectives should be utilized as PH re-organizes itself to maximize results in the last two years of programming. It was recommended that the community pharmacies be evaluated to develop criteria for choosing communities in the future and for establishing the how PH will support the community. In the most successful examples, initial pharmacy kits were not donated to the community because this often led to community members demanding medications at no cost. While this may not work in every community, PH may be able to discern in which communities a donation is not helpful.

5. Use data to make key management decisions. Between KPC surveys, the project needs to make important management decisions. Staff, and especially the Project Manager, need to demand of themselves greater use of data when making these decisions. A prime example is

found in the training activities of this project. As requests from the MOH to provide more training workshops were received, and as the training workshops were programmed in the DIP, the project continued to provide these without critical evaluation of the quality and, more importantly of the impact these activities were having. Project staff need to have mechanisms in place to evaluate such decisions and to be able to act upon these decisions (PH HQ does allow adequate flexibility for the field to make such determinations). In this case, there existed many times when it would have been appropriate to terminate trainings until results could be measured. Any request from the MOH should be evaluated using existing data or by collecting additional data. The latter does not need to be exhaustive to be useful. Another recommendation was made to improve collection of data for decision making; to consider use of lot quality sampling which could help the project to monitor progress towards objectives between KPC surveys.

6. Improve the capacity of Project HOPE staff. The PH staff serves as a technical partner to the MOH, however their technical skills need to be continually upgraded to maintain their usefulness as a source of information and assistance to the MOH. It is understandable that the project focused on improving the capacity of the MOH and that trainings and other activities were geared to MOH staff. However, there should be an increased effort to upgrade and maintain the technical and managerial skills of the project staff. Project HOPE should begin by increasing communication between HQ and project staff (already in progress), between project staff and other PVO projects including other PH programs with the same capacity building strategy, and between project staff and expert groups especially via the internet (CSTS, CORE, BASICS, etc.). In addition a systematic review of staff skills and training needs should be completed on a regular basis, as often as every six months.

7. Improve IEC and training materials. For the most part, IEC materials have been developed using existing materials. While this is a good approach, particularly given the large number of NGOs and expert groups working in Nicaragua, the materials should be reviewed to make improvements. It is recommended that key materials be reviewed by technical experts in the respective fields. These experts could be local or could be accessed through HQ and CSTS.

F. Results Highlight

Project HOPE (PH) has implemented a successful Child Survival program in the Department of Chontales in Nicaragua. Chontales is located to the North of Managua, Nicaragua, along Lake Nicaragua. The project started in 1998 and will continue through 2002. The project area is large, serving a total population of over 250,000 persons. Target beneficiaries include women of childbearing age and children under the age of 6 that total about 135,000.

The key interventions are focused on the leading causes of child and maternal mortality: 1) Immunizations, 2) Diarrheal Case Management, 3) Pneumonia Case Management, 4) Nutrition and 5) Maternal and Newborn Care. The Department of Chontales was selected for the project site because of its location within USAID Mission priority area and because very high rates of maternal and child mortality are reported here.

Project HOPE is implementing this project using a key strategy that has promise of long-term sustainability. Rather than implement the project with their own staff and resources, Project HOPE has formed a partnership with the Ministry of Health of Chontales to improve their capacity to deliver Child Survival interventions. Project HOPE also works with communities to mobilize members to work together to demand quality services from the Ministry of Health and assist communities to find their own resolutions to the health problems they are facing.

At the mid-term evaluation, individual and group discussions were conducted to collect data and impressions about the project from the MOH and Project HOPE, volunteers, health workers, community members and others. In addition, data was collected from PH and MOH records to confirm adherence to the Detailed Implementation Plan (DIP) workplan.

The mid-term evaluation reported that the project was being successfully implemented, and the following key strengths were documented:

- Community member's state health services have improved in the project area in the last two years.
- Improved feeding practices were documented.
- Excellent relations between Project HOPE and the MOH were demonstrated.
- Community participation is high in many areas and positive examples of cooperation to improve health services were identified.
- Project HOPE identified key weaknesses to its managerial structure and began addressing these debilities prior to mid-term evaluation.
- Project HOPE has hired a new Project Manager with a good technical background, knowledge of PH's programming in Nicaragua and a willingness to work collaboratively with PH HQ, and technical partners in Central America and the US.
- Project HOPE staff are well educated and are a vital resource to the program.
- Project HOPE's key strategy, working directly with the MOH to improve their capacity, serves as an innovative and highly sustainable model. Achieving results under this model that may be replicated by other CS projects.

The mid-term evaluation team also made recommendations to improve management and reported outcomes of the program in the following two years of operations. The team concurred that maximizing impact would need to be a key priority for the Project HOPE and MOH. The Project HOPE staff remains dedicated to the project goals and committed to making improvements that will result in greater reductions of childhood mortality. Overall, the project has many strengths to build upon and can reach the overall project goals in the remaining two years of programming with strong leadership and a focus on priorities and results.

G. Action Plan

Please see Attachment 5.

H. Attachments

1. Baseline information from the DIP

2. Team members and titles

3. Assessment methodology

4. Objectives and Indicators Table

5. Action Plan

6. Special Reports

-Mid-term KPC Report
-Management plan developed by PH
-Financial Report

1. BASELINE INFORMATION FROM THE DIP

A. Field Program Summary—REVISED AT MID-TERM

PVO/Country: Nicaragua Program duration (dates): Sept 30, 1998 to Sept 29, 2002

1. ESTIMATED PROGRAM EFFORT AND USAID FUNDING BY INTERVENTION

Intervention	% of Total Effort (a)	AID Funds in $ (b)
Immunization	10%	$99,862
Nutrition and Micronutrients	15%	$149,793
Breastfeeding Promotion	10%	$99,862
Control of Diarrheal Disease	25%	$249,656
Pneumonia Case Management	25%	$249,656
Control of Malaria	0%	$
Maternal and Newborn Care	15%	$149,793
Child Spacing	0%	$
STI/HIV/AIDS Prevention	0%	$
Others (specify)	0%	$
Total	100%	$998,623.

(a) Estimate the percentage of total effort (from USAID and PVO match funding) the program will devote to each intervention to be implemented.

(b) Estimate in US dollars (not in percent) the amount of USAID funding (excluding PVO match funds) the program will devote to each intervention.

B. PROGRAM GOALS AND OBJECTIVES—REVISED AT MID-TERM.

INTERVENTION: Control of Diarrheal Disease
Percent Effort: 25%

Strategy	Objetive	Indicator (measurement method)	Activity
CORU Community-based IMCI	. Increase from 36% to 50% the ORT use rate. 1a.100% of the CORUs maintain a monthly stock of at least 30 ORS sachets. 1b.CORU representative will be considered trained when application of protocol from community IMCI has been verified by interview with mother. . Reduce from 71% to 50% the percentage of cases of diarrhea being treated with antibiotics/antidiarrheal drugs. . Increase from 18% to 50% the percentage of mothers able to recognize the danger signs of dehydration. . Increase from 3% to 20% the percentage of mothers asking the brigadistas for help when their children have diarrhea. . Increase from 45% to 60% the percentage of mothers who give their child more/equal amounts of liquid during diarrhea. . Increase from 50% to 70% the proportion of mother who continued feeding the child during diarrhea.	1. Percentage of mothers giving ORT to chidren <24 months with diarrhea in past two weeks (KPC) 2. Percentage of mothers giving antibiotics/ antidiarrheals to child with diarrhea in past two weeks (KPC) 3. Percentage of mothers able to correctly state danger signs of dehydration (KPC) 4. Percentage of women seeking care at CORU for <24 mo. Old child ill with diarrhea in past 2 weeks (KPC) 5. Percentage of mothers reporting haven given their child more or equal amounts of fluid if ill with diarrhea in the past 2 weeks (KPC) 6. Percentage of mothers reporting having continued feeding their child if ill with diarrhea in the past 2 weeks (KPC).	1. New monitoring and supervisory systems for UROCs and community IMCI. 2. Radio messages for diarrhea adapted based on the recent study and continually monitored for on-going effectivness (focus groups). 3. Analysis and improvement of the logistical system to reduce stock outs of ORS sachets at the CORUs. 4. Train 100% of CORU coordinators (community volunteers) in community-based IMCI. 5. Update the knowledge and skills of the Project Hope staff in CDD (assistance from HQ and CSTS, etc.). 6. Verify satisfaction of mothers with community IMCI materials via on-going focus groups and interviews.

INTERVENCIÓN: ARI
Percent Effort: 25%

Strategy	Objetivo	Indicador	Actividad
IMCI Community -based IMCI Community drug kits	. Increase from 2% to 10% the proportion of mothers recognizing chest in-drawing as a danger sign. . Increase from 45% to 80% the proportion of mothers able to recognize fast breathing as a danger sign of pneumonia. 3. Increase to 80% the proportion of pneumonia cases treated according to IMCI protocols.	. Percentage of mothers with children < 24mo who can identify chest in-drawing as a sign of pneumonia. (KPC) . Percentage of mothers with children < 24mo who can identify fast breathing as a sign of pneumonia. (KPC) . Percentage of MOH health workers observed properly treating a child with pneumonia according to IMCI protocols (Health Factilities Assessment)	1. Evaluation of existing community drug kits within project area and in areas of fellow PVO/NGOs, in order to develop a model criteria for future drug kits (donation of initial kit vs. no donation, community selection considerations, etc.). 1a. Develop pilot project based on evaluation (1.) to test model 10 communities of 2 municipalities. 1b. establish definition of successful community drug kit 2. Train 100% of brigadistas and MOH personnel in ARI/IMCI protocols. 3. Update the knowledge and skills of the Project Hope staff in CDD (assistance from HQ and CSTS, etc.). 4. Complete the BASICS/IMCI HFA (includes observation of staff, testing, etc). 5. Radio messages for ARI adapted based on the recent study and continually monitored for on-going effectivness (focus groups).

INTERVENTION: Immunization
Percent Effort: 10%

Strategy	Objetive	Indicador	Actividad
Integrated visits National campaigns	. Increase full immunization coverage from 65% to 80%. . Increase from 85% to 90% the percentage of children having an immunization card.	1. Percentage of 12-24 mo. old children fully immunized (KPC) 2. Percentage of mothers in posession of an immunization card for their < 24 mo old (KPC)	1. Evaluation of the effectivness and cost of the different immunization strategies being used by the MOH. 2. Identification of areas or communities with low coverage to examine factors affecting low coverage. 3. Accompany MOH personnel on 10% of integral visits. 3a. Develop supervisory checklist for evaluation of integral visits. 4. Promote EPI campaigns using radio advertisements.

INTERVENTION: Nutrition

Percent Effort: 25% (Iron: 15 % ; Breastfeeding: 10%)

Estrategia	Objetivo	Indicador	Actividad
AIEPI Clínico AIEPI comuniatrio	1. Increase from 17% to 30% the percentage of mothers exclusively breastfeeding their infant to six months. 2. Reduce the prevalence of anemia in children <2 years of age from 50% to 30%. . Increase from from 50% to 52% the percentage of children receiving BF during the first hour of birth. . Increase from 17% to 30% the percentage of children who continue breastfeeding to 24 months. . Increase from 70% to 90 % the percentage of kids under 2 years with growth monitoring in the past 4 months. . Increase from 18% to 40% the proportion of mothers who identify food sources rich in vitamin A	1. Percentage of mothers with children under 6 mo of age that are exclusively breastfeeding (KPC) 2. Percentage of children that are anemic (< 11 mg/dl) upon hemocue analysis (KPC) 3. Percentage of mothers that report giving breast milk to their child in the first hour after birth (KPC) 4. Percentage of children 20 to 23 months of age that are still breastfeeding (KPC) 5. Percentage of children who have a recorded growth monitoring visit in the 4 months prior to being surveyed (KPC) 6. Number of women with children <24 mo. who can name at least three foods rich in vitamin A	1. Assist the MOH with their health initiative "Friends of the mother and child" Specifically strengthening: Mother groups, counseling, promotion at the community level and radio announcements. . Find and analyze information regarding the causes of anemia en children under 2 years of age. 3. Work with the MOH to understand the anemia findings of the mid-term KPC. 4. Analysis and improvement of the logistical system of Fe supplements. 5. Supplement 50% de niños con Fe according to the IMCI protocols. 6. Maintain stocks of Fe in health centers. 7. Develop a monitoring and evaluation plan to aid with compliance of the supplementation of children. 8. Verify, through maternal interviews, supplementation with Fe. 9. Sample children for anemia with hemocue analyzer every 6 months. 10. Develop and air radio messages about increased consumption of iron rich foods. 11. Assist the MOH to deliver growth monitoring. 12. Assit the MOH to monitor and supervise the application of nutritional standards.

42

Intervention: Maternal Mortality
Percent effort: 15%

Strategy	Objetive	Indicator	Activity
Integrated visits	1. Increase from 25 to 50% the proportion of mothers retaining thie HCPB (health card). 2. Increase from 82% to 90% the percentage of pregnant women with at least two prenatal visits (new objective) 3. Increase from 24% to 40% la proportion of mothers with at least one postnatal visit. 4. Increase from 40% to 60% the proportion of mother with at least 2 dose of TT.	1. Percentage of mtohers with children <2 yr. with their HCPB card (KPC). 2. Percentage of mothers with at least two prenatal visits recorded on their HCPB (KPC) 3. Percentage of mothers with at least one postnatal visit recorded on their HCPB (KPC) 4. Percentage of mothers with at least two TT doses recorded on their health card (KPC)	1. Assist the MOH with integrated visits in areas with low coverage. 2. Develop a system of evaluation and monitoring for maternal care at the community level to address: registration of pregnant women, TBA training, referral of high risk pregnancies, strengthening. 3. Conduct re-training exercises with TBAs. 4. Coordinate with the MOH, based on available resources, the lack of supplies and medications for TBAs. 5. Establish official agreements at the local level with the MOH to prevent loss of HCPB. 6. Permanently promote, via community level volunteers, the importance of retaining maternal health cards. 7. Establish a system of monitoring and evaluation maternal health care.

C. Description of the Project Target Area—NO REVISIONS MADE AT MID TERM

This program is located in the Department of Chontales, Nicaragua, along the border in the North of the country and along Lake Cocibolca. Juigalpa, 137 km south east of Managua, is the departmental capital and the center of operations of the SILAIS.

Chontales is one of 19 administrative units of the Integrated Health Care System of Nicaragua, the SILAIS. The project target area covers eight municipalities with a population of 261,983. Among these, there are 80,376 women of reproductive age (15 – 49), 7,465 children under one, and 44,264 children between one and five years of age.

The area has experienced significant demographic changes, including

- The annual population growth rate is 3.5% annually, by far exceeding national and Central American rates.
- In the 80s, there were political and military pressures on the population to move close to the municipal centers.
- As a result, rural populations were seeking work in the commercial and non-agricultural sector in the urban centers.

These demographic changes have placed tremendous pressure on the system's basic services for the population, which targeted mainly the four principal municipalities, Juigalpa, Villa Sandino, Nueva Guinea, and Santo Tomás.

In 1994 – 1995, the Nicaraguan Government, through its Social Investment Fund (FISE), developed the following table on poverty in Nicaragua by department.

Department	IPD (20 %)	IDC (40%)	ICAP (40 %)	IRP
Jinotega	15.70	33.40	90.00	52.50
Atlántico Norte	6.74	23.50	94.58	48.58
Madriz	4.22	38.10	80.81	48.41
Atlántico Sur	17.36	22.60	86.22	47.00
Boaco	1.43	31.40	80.25	44.95
Matagalpa	3.35	32.10	78.05	44.73
Río San Juan	8.23	18.10	89.12	44.53
N$^{va.}$ Segovia	13.14	19.50	71.86	39.17
Rivas	1.04	27.80	66.48	37.92
Chontales	**7.06**	**23.20**	**65.85**	**31.03**
Chinandega	0.74	23.60	65.31	35.71
León	0.18	21.50	65.29	34.75
Estelí	2.64	25.30	54.64	32.50
Carazo	1.65	31.90	45.54	31.31
Granada	0.60	26.80	45.57	29.07
Masaya	0.17	31.80	40.59	28.99
Managua	0.54	17.90	18.46	14.65

FISE, Division of Resources and Training.

The Poverty Index (Indice Relativo de Pobreza – IRP) is an aggregate of the rate of chronic malnutrition (Desnutrición Crónica - IDC), access to safe drinking water (Cobertura del Servicio de Agua Potable – ICAP), and population displacement (Población Desplazada - IPD) – contributing 40%, 40% and 20%., respectively to the Poverty Index.

Poverty is defined as:

Extreme poverty – more than 49.9% of the population lack services related to the IRP.
High poverty – 25.01 – 49.9% of the population lack services related to the IRP.

The poverty map shows that Chontales is the department most affected by poverty: 70% of the population is unable to meet its basic needs; 16% live in extreme poverty; 25% of households are headed by females; and 24% of women older than ten years are illiterate.

Participation in the formal education system is relatively low. Only 14% of children attend nursery schools, 64% of children 7 – 12 years are in primary school, and 25% of youth attend secondary schools (Ministry of Education and Culture – Chontales 1997). The official illiteracy rate is 35%. Project HOPE's baseline survey found that 33% of the women interviewed were illiterate.

Most of the population belongs to the Catholic Church, but there is a rise in evangelical churches in the target area.

According to the census of 1995, there are about 30,000 households in the target area, distributed as follows:

	Municipality	Households					
		Urban	%	Rural	%	Total	%
1	Juigalpa	6,665	33.17	2,434	22.68	9,099	29.52
2	Santo Tomás	1,780	8.86	857	7.99	2,637	8.55
3	Acoyapa	2,511	12.50	1,196	11.14	3,707	12.03
4	San Pedro	442	2.20	656	6.11	1,098	3.56
5	Villa Sandino	485	2.41	1,956	18.23	2,441	7.92
6	Nueva Guinea	8,007	39.85	2,022	18.84	10,029	32.54
7	Sto Domingo	203	1.01	1,611	15.01	1,814	5.88
8	Cuapa**		0.00		0.00	0.00	0.00
	Total	20,093		10,732		30,825	100.00

Project HOPE and National Census 1995.
** Included in Juigalpa.

With about 62% of all households, Nueva Guinea and Juigalpa account for most of the population in the target area.

Juigalpa was the economic and political capital of the department in the 1980s and the center for public and private services. As a result, Juigalpa attracted people from the rural areas of the department and other cities from the interior of Nicaragua.

Nueva Guinea has become a national center of agricultural excellence and has attracted farmers dedicated to raising grains and until recently also, potatoes.

The lack of essential services creates significant social tensions. Only 40% of the population has piped water, and half of these households are located in Juigalpa. 48% of the population has electricity, all concentrated in the urban centers. Households in the rural areas do not have access to electricity. There is no sewage system, and sewage is not treated, resulting in environmental contamination in the target area, particularly in the urban centers. Two of the five major national newspapers are produced in the target area. Radio is the major mass media, and there are three AM stations and two FM stations.

Economic activities in the target area are as follows, in order of priority:

(1) Cattle production – Good producer of foreign currency (sale of cattle to other countries, production of milk and milk products).

(2) Agricultural production can be divided into two components:
-Small and medium-size producers which own 1- 10 manzanas and produce 250,000 tons of grain per year.
-Industrial production of rice, a major cash crop for export. 35,000 manzanas are used in rice cultivation, causing significant environmental pollution of rivers, brooks, and Lake Cocibolca due to pesticides.

(3) Commercial activities – These have flourished with the influx of individuals displaced from other sectors (government employees, veterans, resistance fighters, etc.) and from the multiplicative effect of other economic activities.

(4) Forestry – This is minimal in the target area, and almost 80% of the forests have disappeared over the past 50 years.

(5) It is estimated that 72% of the economically active population is engaged in the primary sector, 8% in secondary sector, and 20% in the tertiary sector.

There are no data about the extent of integration of women and children in production, but it is obvious that the involvement of both groups is on the increase. Family activities, such as the care of young children, are assumed by other family members. The involvement of women and children is greatest in the informal sector.

Health Status in the Program Area

According to the SILAIS/Chontales (1997) the maternal mortality rate is 347/100,000 live births. The primary causes of mortality are hemorrhage (34.5%) and sepsis (33.4%). There is no current information on the abortion rate. During 1998, 287 abortions were admitted to health facilities in Chontales. The national maternal mortality rate is 100/100,000 live births, even though a rate of 160/100,000 has also been reported. Even though the women of Chontales represent only 7% of all Nicaraguan women, they

account for 13% of maternal deaths. It is estimated by the SILAIS Chontales that 77% of deliveries are attended by untrained TBAs or staff with insufficient training. More than 30% of births are to adolescents.

According to the baseline survey, only 25% of women had maternal care cards, and of those with cards, 80% had two or more prenatal visits. However, 80% of all women interviewed stated that they had received prenatal care for their last pregnancy at a health facility, most without maternal care cards. According to the SILAIS only 24% of women present for prenatal care during the first trimester (SILAIS Chontales, *Organization and Management of Health services, Nicaragua 1996*).

The fertility rate in Chontales is 3.9, but there are significant differences between the urban and rural areas. With respect to family planning (FP), according to the project baseline survey, 56% of women with children under two not desiring a pregnancy in the following two years use modern contraceptives. However, only 16% of adolescent mothers use FP. These data are very similar to statistics from PROFAMILIA/Chontales.

In 1997, the infant mortality rate (IMR) in Chontales was 83/1000 live births, compared to a national average of 53/1000 (*National Health Policy 1997 – 2002*). The primary causes of infant death are ARI (34.4%), diarrheal diseases (16.8%), perinatal causes (12.8%), bacterial meningitis (4.8%), and infection (4%).

There are no official data available on the mortality rate for children aged 1-4 years. The closest indicator available is the mortality rate for children below five years of age (64/1000, for 1995).

Health Infrastucture

In the target area, the SILAIS has eight health centers, 43 health posts, and a regional referral hospital located in Juigalpa with 183 beds and specialties in general medicine, pediatrics, neonatology, OB/GYN, internal medicine, surgery, and orthopedics.

	Municipality	Area in km²	Population	Health Centers			Health Posts		Total
				A	B	C	A	B	
1	Juigalpa	1,037.00	50,916		1		9	1	11
2	Santo Tomás	450.00	17,590	1		1	1	1	4
3	Acoyapa	1,055.00	19,852			1	2	4	7
4	San Pedro	604.00	5,638			1			1
5	Villa Sandino	1,168.00	19,120			1	3	2	6
6	Nueva Guinea	2,774.00	98,690	1			4	11	16
7	Stº Domingo	717.00	26,653			1	2	1	4
8	Cuapa		7,646				1	1	2
Total		7,805	246,105	2	1	5	22	21	51

SILAIS/Chontales.

In Juigalpa, there are three private clinics with beds that provide ambulatory services and hospital care to workers insured by the INSS and private patients.

To-date, the SILAIS does not have accurate statistics about the number of physicians and doctors' offices that provide services in the target area.

In addition to the SILAIS, which is the primary project counterpart, the following organizations are involved in maternal and child health education and service delivery:

- Family Ministry (MIFAMILIA)
- National Rural Development Institute (IDR)
- Ministry of Education, Culture, and Sports
- Municipalities
- Municipal Development Committees
- The System to Strengthen Primary Health Care (FORSAP)
- PROFAMILIA, and
- HANDICAP International.

These organizations participated actively in the development of this plan. Their current activities are described in the section devoted to Partners.

D. PROGRAM DESIGN—NO REVISIONS MADE AT MID-TERM

Goal: Reduce the morbidity and mortality in children under five and women of reproductive age in eight municipalities of the department of Chontales.
The project will benefit 51,729 children under five, approximately 9,729 annual births, and 80,376 women of reproductive age. Project effort is allocated as follows:

	Intervention	% effort
1	Maternal and newborn care	30
2	Diarrheal diseases	20
3	Nutrition and micronutrients	25
4	Acute Respiratory Infections	20
5	Immunizations	5
Total effort		100

The project expects to have the following impact:

- Improve the community outreach capacity and the quality of service delivery of the MOH.

  Project staff will work with the counterparts to instill an awareness and commitment to quality in service delivery, improve knowledge and practices of mothers and

community members, and increase the involvement of community groups in addressing the causes of the existing health problems.

- Strengthen the leadership of the SILAIS/Chontales by helping it to coordinate with and/or supervise the various community agencies involved in health, as well as other agencies that contribute indirectly to health improvements in the target area. The SILAIS staff will be trained and receive assistance in strengthening technical capabilities, education skills, community organization and outreach. As a result of this strategy, it is expected that the MOH will:

    * Provide quality services and change the traditional attitude of waiting for the community to come to the health facility to resolve their health problems;
    * Develop social consciousness and leadership;
    * Participate in municipal development committees. The latter are directed by the local mayors which are recognized by the National Government, charged with the responsibility to develop community development action plans, and invested with the authority to facilitate inter-institutional cooperation to achieve the set goals and objectives.

- Project HOPE will assist the municipal and community committees through participation in the planning process, implementation, and monitoring of the public health activities that fall under the scope of this project – to integrate health goals and objectives that transcend the local area. Where there are no local committees in existence, the MOH, in coordination with the local mayors' offices, will promote the development of committees that will foster social participation and plan and implement activities that will improve the health status of the target population.

The model of promoting social participation through community development committees and municipalities, means that social groups have to participate in the process of service delivery at the community level and that other organized groups (development committees, cooperatives, etc.) have to be motivated to include health components in their activities.

This strategy will result in a model that will educate, motivate, and address the priority maternal and child health problems by establishing social groupings where leaders and health workers plan, implement, and evaluate activities jointly.

Project HOPE's role will be that of facilitation and supervision, instead of programs implementation. Project staff will train counterparts at the department level and then take on the role of facilitator, providing technical assistance and support for the project's activities and training. Then municipal and community level counterparts and volunteers are trained by the master trainings, HOPE staff will provide technical support and supervision. This will help build a solid infrastructure, capable of sustainable training and education activities.

Rationale for Selection:
Project interventions –the same as those presented in the original grant proposal- were chosen after an assessment of the health status in the project area, and strengths and weaknesses of existing health services.

Immunizations: while EPI coverage rates have increased substantially in the last years, almost one third of the children still lack complete immunization coverage.

Nutrition: The country lacks a National Food and Nutrition plan, current activities are not integrated and there is no emphasis in counseling. Growth monitoring has become a ritual, with very limited use of the information at the individual and community level. Anemia and Vitamin A deficiency appear to be public health problems in the target area according to dietary and biochemical data.

Diarrhea: The second leading cause of death among infants. The ability to recognize danger signs of diarrhea must be improved with an increasing the use of home based fluids. Prevention must be stressed.

Pneumonia: The leading cause of death in children under 12 months of age. Mothers must learn danger signs. Health facilities and community volunteers should be able to diagnose and treat pneumonia. The provision of basic drugs must be regular and at affordable prices.

Maternal and newborn care: More than half (DHS 1998) of mothers give birth in their home, often with the help of a poorly trained person. Most of the mothers do not have a card to record prenatal care.

Relationship with health facilities:

Project HOPE has excellent relationships with MOH officials and staff, because of a long history of cooperation in this country, including strengthening of health services. Integration with project activities has been possible through joint planning and implementation of baseline studies. HOPE has also been successful in involving partners in project activities, since there are common goals and the same target population. Partners agree that close coordination saves resources and maximizes coverage and impact.

Operations research:

MOH has asked Project HOPE to conduct with their cooperation two studies:

The first will explore/ document the work actually done by volunteers: how much time they devote to health promotion/ basic health care; acceptance by the community; quality of their work; impact; mechanisms for compensation/motivation.

The second study will document existing IEC materials: access, coverage, perceptions by the mothers, recall rate and impact on knowledge level and practices. Improved educational materials are expected to be developed using this information.

Those studies are expected to involve students from the local Nursing Institute (either in elective rotations or thesis work) with supervision of MOH and HOPE staff

E. PARTNERSHIPS—NO REVISIONS AT MID-TERM

The Ministry of Health. The MOH is the main counterpart in this project, because it is the primary consistent health provider in the department. It is also the only health providers for underprivileged populations. The MOH is the only agency which can institutionalize the project activities. Sustainability is the key concern of this project which focuses on capacity building and training and the development of appropriate systems for the MOH. All activities will be implemented through or jointly with the MOH.

Ministry of the Family (MIFAMILIA). This governmental agency formerly operated under the name of FONIF. It receives food aid through the World Food Program and is involved in the standardized case management of diarrheal diseases of at-risk children through child feeding programs. There are 65 feeding centers in the target area which serve 4,500 children ages two to six years. MIFAMILIA has an agreement with the MOH to provide growth monitoring, health education, counseling on proper feeding practices, and the consumption of foods rich in vitamin A. MIFAMILIA provides food to at-risk, malnourished children which are referred by the *brigadistas* to the feeding centers. MIFAMILIA also works with the municipal committees to determine the causes for malnutrition in each locality and assists in developing solutions to address this problem. As a governmental agency, MIFAMILIA has access to other governmental resources and can use these in its activities with the communities.

Project HOPE has worked well with MIFAMILIA in its previous CS projects; and MIFAMILIA representatives have expressed their satisfaction with this collaborative effort in a past CS final evaluation. The most successful joint activities in the past have included community organization to mobilize community leaders and resources to address the root causes of malnutrition; the development of a nutrition surveillance system to monitor children at-risk for malnutrition; the promotion of family vegetable gardens to increase access to foods rich in vitamin A and iron; and the development of instruments to monitor services. These jointly developed products and strategies will also be used in this project.

Institute of Rural Development (IDR). The IDR is a governmental initiative to assist rural communities in their development and stabilize them. It operates in those zones of the country (e.g. Chontales), which were particularly affected by the past civil war. The IDR uses a strategy of developing "Centers for Development" which is based on the concept of "incubador economico", used during the economic depression in the U.S. Its purpose is to concentrate resources for local development (e.g., training centers, material

resources, income generating projects, adult education/literacy activities, and management training) on high-risk communities, with the expectation that these resources will stimulate local initiative and impact on the local economy, and as a result, on the region overall. Primary clients are farmers and cooperatives. The project and the municipalities work directly with this initiative (the directors report directly to the President) to achieve an impact through a synergy of improved health status and local economy.

The function of the IDR is to bring new resources to the communities that will result in improvements of health status, such as access to clean water, improvements in environmental sanitation, and diversification of available foods. These types of activities are incorporated into the local health plans that are being developed jointly by the municipal committees, the MOH, and HOPE.

Ministry of Education (MED). Project HOPE has worked with the MED in past CS projects. The MED has a network of rural school teachers which often are leaders in their rural communities and can increase the access to children and their families. This project will train teachers in basic health messages to be transmitted to school children and at the child feeding centers. The teachers will sensitize communities to topics related such topics as pregnancy, breastfeeding, and basic child needs; they will also assist with the formation of youth groups. Some of the teachers may also be trained to create "Centers for Development" and to establish school vegetable gardens.

The MED and the MOH have an agreement that education on human sexuality, reproductive health, hygiene, and environmental sanitation be taught at the schools. However, the MOH has not been able to meet its responsibilities, and the MED is anxious to work with Project HOPE to move this initiative ahead again.

Municipal Offices. In the target area a system of municipal committees is emerging. The committees are working on reconstruction and on formalizing ways of community participation and local decision-making. The committees, authorized by the National Government, are directed by the mayors' offices and are the primary mechanism for inter-institutional coordination, planning, and evaluation. One of the function of these committees will be to strengthen local inter-institutional collaboration among the organizations involved in this project and to place pressure on the MOH to increase its community outreach. The committees participate in the monitoring and evaluation of the activities of the various involved agencies (among them development groups and cooperatives) and, with the assistance of this project, introduce health components to organizations not directly working in health.

The committees, health providers, and community organizations will engage in discussions, planning, and decision-making to address local health problems. The community, through its leaders, *brigadistas,* and TBAs will complement the efforts of the MOH and other public and private entities. The mayors' offices and municipal committees will develop local health and development plans that include the external resources from IDR, MIFAMILIA, and HOPE. The committees will also participate in

the identification of *brigadistas*, TBAs, and community members in education and training activities. Furthermore, they will be in charge of developing emergency transport plans and disseminating the availability of emergency transport in the community.

Strengthening Primary Health Care (FORSAP). This agency has been the primary source of external assistance to the SILAIS of Chontales. FORSAP is an activity of the Dutch Government with a focus on repairing the infrastructure, health equipment, and a component of training *brigadistas*, TBAs, and health providers. The project will work closely with the SILAIS and FORSAP to identify and direct financial resources toward the repair of those health facilities and infrastructure that are creating barriers to improving health services. FORSAP will also contribute financially toward the training of existing *brigadistas* and TBAs and to new training activities.

PROFAMILIA. This organization is the Nicaraguan IPPF affiliate and provides family planning and reproductive health services. It has a clinic in Juigalpa and a network of distribution posts for contraceptives. The clinic provides counseling, reproductive health services, sterilization, and family planning methods.

The project will not directly provide family planning services. PROFAMILIA successfully provides integrated services, and HOPE activities would duplicate such efforts. To maximize resources of HOPE and PROFAMILIA, the project, through the *brigadistas,* will work with the agricultural cooperatives and municipal committees to refer interested clients to PROFAMILIA. PROFAMILIA will train *brigadistas* and TBAs in reproductive health and family planning, and these community volunteers will refer clients to the PROFAMILIA network.

Regional Commission for Rehabilitation (CODERE). CODERE and the MOH are implementing a program for early identification of developmental problems in seven municipalities, five of them in the project target area: Juigalpa, Cuapa, Acoyapa, Santo Tomás, and Santo Domingo. The other municipalities in the target area will be absorbed gradually into this program. An agreement was developed involving the MOH, CODERE, and HOPE to assure follow-up to this activity in the target area.

The organizations listed above have been involved in the program design. Letters of Understanding and Agreements are attached in Annex 4.

The monitoring of the described partnerships is initiated with the signing of agreements that specify roles and responsibilities, as well as the scope of activities and contributions to be made by each of the involved agencies. The MOH will take the leadership and supervise the fulfillment of the agreements in its efforts to strengthen local capacity, leadership, and the primary health care system. It is also expected that this process of collaboration will contribute towards strengthening and capacity-building of each of the partner organizations. Characteristics and objectives of each agency will be taken into account.

Preliminary discussions have defined the roles and responsibilities of the main project partners as follows:

MOH

1. Train *brigadistas* and TBAs in all interventions and community education.
2. Conduct well-child activities (growth monitoring, deworming, etc.) in the feeding centers, with the help of trained community volunteers.
3. Conduct qualitative and quantitative research to assess the impact of the inter-institutional collaboration, with the support of HOPE staff
4. Promote the coordination, planning, and evaluation of activities.
5. Develop reports of the activities for the municipal commission.

MIFAMILIA

1. Create and strengthen the child feeding centers;
2. Assure the availability of food and supervise the use of foods at the feeding centers.
3. Supervise the operations, organization, and logistics of the feeding centers.
4. Coordinate MOH activities at the feeding centers.
5. Conduct studies to assess the quality and impact of this inter-institutional collaboration.
6. Promote the development of support groups for education activities in nutrition and environmental sanitation in the communities.
7. Participate in training activities about the preparation of foods rich in iron and vitamin A and motivate the participation of mother with children enrolled in the feeding centers.

CODERE

1. Train health facility staff in the detection of children under five with psychomotor delays.
2. Supervise and monitor the early detection activities.
3. Develop strategies to improve the detection of children with psychomotor problems (basic messages, posters, flipcharts, radio messages, etc.).
4. Evaluate the possibility of adding Nueva Guinea to the target communities in the Year 2000.
5. Inform the MOH, MIFAMILIA, and HOPE about at-risk children so they can be included in the food programs (home gardens, feeding centers, supplementation, etc.).
6. Assist the municipalities in the training of health volunteers.
7. Systematize the health information system.
8. Analyze the information to assess the sensitivity of the project instruments.

HOPE

1. Train SILAIS staff at all levels, members of municipal committees, and staff of MIFAMILIA in the CS interventions.
2. With staff from the MOH, conduct investigations about the quality of MOH health services and develop strategies to improve these.
3. Promote the organization of municipal committees.

4. Provide or procure technical assistance to the MOH and other partner agencies to achieve the project objectives
5. Promote the development of school and family vegetable gardens to increase the consumption of foods rich in vitamin A.
6. Assist the MOH in shortfalls in pharmaceuticals and medical supply.
7. Provide technical assistance in the development of supervision and follow-up systems for service delivery at the community level.
8. Train MOH staff, members of the municipal committees, and counterpart agencies in the use of information for evaluating the project activities.
9. Assist the MOH in integrating community committees in decision-making processes.

Project HOPE has agreements with all counterpart agencies, except the MOH, specifying roles and responsibilities (see draft in Annex IV). The agreement with the MOH should be completed shortly.

Progress will be assessed annually with the counterpart agencies, and barriers to meeting commitments will be identified. A separate document will be developed for the MOH and the municipalities on the conclusions that were drawn and the recommendations on how to overcome the barriers.

As part of this project, The MOH will annually assess the knowledge and skills of the *brigadistas* and TBAs to determine areas of weakness that will require mini courses of refresher training.

As part of ongoing monitoring, the project will also assess the knowledge and skills of the project staff and will review the strategies and technical information they use. These monitoring activities will constitute mini-evaluations of quality assurance in the services provided by Project HOPE. The staff will also receive in-service training in technical and administrative skills during the two annual technical visits from HOPE Center staff.

In addition, the staff will participate in training opportunities of other organizations, as well as in the international training workshops budgeted for in Year 2 for HOPE staff, focusing on behavior change methodologies. This workshop will provide an opportunity to update skills and share lessons-learned with other HOPE CS projects.

F. MONITORING AND EVALUATION/HIS—NO CHANGES AT MID-TERM

Progress towards achieving project objectives will be monitored in four ways: data collected by a) project field staff, who will document their activities aimed at institutional strengthening b) counterparts at MOH facilities, FONIF feeding centers, and integrated visits at rural communities; c) project municipal coordinators, in charge of providing direct feedback to municipal health committees, and d) by the project coordinator, in charge of reviewing consolidated data, and comparing it to other sources (KPC, Basics Health Facility Assessment) to provide feedback to SILAIS, HOPE Headquarters and USAID.

Project HOPE does not plan to establish an independent system for data collection, parallel to the MOH HIS, because of the heavy paperwork load to MOH staff. By extracting the more relevant and reliable information and promoting their timely analysis, our project will promote better management practices including the simplification in procedures and reduction in paperwork.

The specific variables to be collected to monitor project activities are listed in the following table

Activity/ variable to be measured	Data collection instrument	Responsible - Data collection	Responsible- Data analysis	Frequency
Maternal knowledge and practices	KPC	HOPE and counterpart staff	MOH and HOPE staff	MT and final survey
Training and performance of MOH staff and brigadistas	Counterpart forms, BASICs health facility assessment (HFA) guide	HOPE and counterpart staff	SILAIS and HOPE staff	Quarterly
Gardens for vitamin A	HOPE form (visitors, active members)	HOPE and counterpart staff	HOPE and counterpart staff	Monthly
Impact of educational messages	Rapid assessments, focus groups, in-depth interviews, KPC	HOPE and counterpart staff	HOPE and counterpart staff	Quarterly
Clinical management diarrhea, ARIs	Modified counterpart forms, BASICs HFA	MOH staff (nurses and statisticians)	HOPE and MOH staff	Quarterly
Prenatal care and # births attended by TBAs	TBA activity form, KPC survey	MOH staff (nurses and statisticians)	HOPE and MOH staff	Monthly
Nutritional status and diet of children	FONIF records, KPC survey Diet (24 hr recall)and nutrition (hematocrit, (anthropometry)	HOPE, MOH and FONIF	HOPE, MOH and FONIF	MT and final surveys
Counterpart staff training	HOPE form, and MOH form	HOPE municipal coordinator	HOPE HI specialist	Monthly
Health management procedures	Annual plan Quarterly adjustments (logistics,demand, budget constraints)	SILAIS and HOPE staff	SILAIS and HOPE staff	Quarterly

Availability of basic drugs, iron and vitamin A supplements, vaccines	HOPE form, MOH records (EPI)	Community pharmacies MOH staff	Municipal and department MOH technical staff, HOPE staff	Monthly
Coordination meetings, follow up of agreements	HOPE form	HOPE staff	HOPE HIS specialist	Quarterly

Qualitative and quantitative studies will be among the principal activities of the project during its first year. They will continue as the basis for evaluation of activities and strategies that are used for the different interventions (See Work Plan in the previous section).

These studies will serve to gain a better understanding of the beliefs, knowledge and practices of the target population; to monitor the appropriateness of the strategies used; to assess progress impact; and provide feedback to the counterpart agencies and communities.

Different methodologies will be used, including focus group discussions, in-depth interviews, 24-hour recall, interviews with key informants, observations, and other quantitative and qualitative methods.

Different methods of data collection developed in previous child survival projects, based on the PHC MAP models will be modified to monitor and evaluate maternal care practices. WHO/PAHO protocols will be used to assess practices in health-facility and community-based IMCI.

KPC surveys will be carried out at the beginning (baseline), in the middle (mid-term), and end of the project. The JHU/CSSP questionnaire will be revised considering past experiences of the project. At midterm and at the end of the project, an external evaluator will be contracted to guide a participatory evaluation with the project team, counterparts, and beneficiaries to provide feedback about project progress and impact. The evaluation reports are presented to USAID/Washington and to the project counterpart agencies.

Qualitative and quantitative project information will be analyzed and shared with all project counterpart agencies. Based on the results, the MOH and the municipal committees will be asked for recommendations to change the design of the program and to develop action plans for changes in the use of project resources.

Annual progress reviews are conducted each year to refine the project strategies and provide different opportunities to the MOH, the municipal committees and the other

members of the program, to increase their use of project information for decision-making and strategic planning.

All MOH personnel, volunteers and TBAs will be trained in providing monthly reports, designed by the municipal committees, HOPE and the MOH. The information collected is designed specifically to facilitate decision-making and the revision of project design.

Also, limited information will be collected to facilitate the follow-up of children with malnutrition, diarrhea, or pneumonia, pregnant women, and immunization coverage of children. Volunteers and TBAs will provide copies of their reports to the MOH and to HOPE. The MOH, with help from HOPE, will develop quarterly reports for the municipal committees and the project counterparts

Written quarterly reports will be sent to HOPE Center on progress made toward achieving the project objectives. The annual reports which summarize the activities, achievement and obstacles of the project will be prepared in Nicaragua, revised at HOPE Center, and later, presented to USAID/Washington.

2. TEAM MEMBERS AND TITLES

2. Core Mid-Term Evaluation Team Members and Titles

Liliana Riva Clement, MPH	External Evaluator.
Luis Benavente, M.D, M.Sc.	Asociate Director, MCH Programs. Project Hope.
Dr. Mario Ortega	Project Manager, CS-Chontales. Project Hope.
Humberto Marti	Project Coordinator, CS-Chontales. Project Hope.
Dr. Gabriel Luna	Project Coordinator, CS-Chontales. Project Hope.
Dr. Dinorah Dias	Project Coordinator, CS-Chontales. Project Hope.
Gabriella Aragon	Project Coordinator, CS-Chontales. Project Hope.
Dr. Ivan Tercero	Project Supervisor, Nicaragua. MSH.

3. ASSESSMENT METHODOLOGY

3. Assessment Methodology

The Core Mid-Term Evaluation Team consisted of the five Project Hope staff members (1-Project Manager and 4-Project Coordinators), a headquarters representative and the external evaluator. As each Project Coordinator is normally responsible for activities in two of the eight total municipalities, it was decided that the evaluation would also divide along municipal lines. A total of 4 municipalities were visited by the team the week of August 7-11, 2000. Municipalities were specifically chosen to be representative of the project population. The group was careful to chose municipalities that reflected both rural and urban settings, and those which had received the greatest and the lowest levels of attention.

Questionnaires for the evaluation were developed the week before the interviews took place. All questionnaires were approved by the entire evaluation team and they were designed as a guide not as an absolutely rigid instrument. Most interviews were conducted in focus group settings. All groups were notified in advance about the interviews and the dates and times for the meetings were confirmed the week before the visit when possible. Cultural norms were taken into account in the development of the questions and order and flow of questions. The week before the focus group interviews, PH staff, including staff based in Managua and Millwood, Virginia were interviewed in small groups and individually by the external evaluator.

In addition to the collection of qualitative information, the external evaluator requested the following reports from PH: 1) List of all training conducted including number and type of personnel trained, 2) List of all activities completed in year 1 and 2, including BCC radio broadcasts, activities completed in partnership with other organizations, etc. 3) List of all BCC and training materials used, including references, 4) List of all communities with staff, volunteers, CORUs and community pharmacies noted. These reports or summaries are included in the annexes of the evaluation. CS-Chontales staff also presented KPC data, data about the completion of DIP workplan activities, and educational/training materials to the team for review.

Following the data collection phase, a series of meetings was held to discuss the information and to formulate a workplan that incorporated recommendations of the mid-term evaluation. The meetings utilized structures taken from Quality Improvement methods, including prioritizing and fishbone analysis. All recommendations were generated in a group setting and agreed to by the team.

4. List of persons interviewed and summary of qustionnaires.

In each municipality the following MOH Departments and groups were interviewed:

Group or Entity Visited	Total Number of Individuals Interviewed
Department of Chontales, MOH	5
Municipal MOH	32 (including 4 Directors)
Local Governor's Office	18
Trained Birth Attendents	45
Members of Breastfeeding Support Groups	23
Community Members	62
Teachers	8
Brigadistas	44
Brigadistas responsible for CORUs	8
Community members responsible for community pharmacies	30
Members of Health Committees	26
Adolescent support groups	68
INISA (National Institute for Water and Sanitation)	2

A summary of the questionnaires used is outlined below:

1. Municipal MOH Interview.
a. What assistance has Project Hope given to the MOH in the past two years? Could you please describe these activities?
b. Has the assistance provided by Project Hope met your expectations? In what specific ways can you say that the assistance has strengthened the capacity of the MOH?
c. What were the MOH needs that were not met by Project Hope's assistance?
d. How has communication between the MOH and Project Hope been over the past two years? How could it be improved?
e. What expectations do you have for the partnership with PH in the coming two years?
f. What role or opportunities did the MOH have to intervene in the preparation of the DIP, the annual workplan and other reports?
g. Have you had the opportunity to go on a supervisory visit in conjunction with PH personnel? Can you tell us how often you did this?
h. Has there been any training or activity that has improved the general managerial capacity of MOH staff?
i. Do you have any other comments you would like to make regarding the PH-MOH partnership and the health services provided in your area?

2. Members of the Community Interview.
a. In general would you say that the health system in your area has improved, stayed the same or worsened in the past two years?

b. Would you say that the health infrastructure in your area has improved, stayed the same or worsened in the past two years?
c. Would you say that the hours that health care is available in your area have improved, stayed the same or worsened in the past two years?
d. Would you say that the courtesy/attitudes towards patients of health care professionals in your area has improved, stayed the same or worsened in the past two years?
e. Would you say that the availability of medications and supplies in your area has improved, stayed the same or worsened in the past two years?
f. Would you say that health counseling services in your area have improved, stayed the same or worsened in the past two years?
g. Would you say that services provided by your local Brigadista have improved, stayed the same or worsened in the past two years?
h. Can you tell us what needs to change for your health services to improve?
i. What assistance does your community need to improve the quality of health services?
j. Do you have any other comments you would like to make about health services in the area?

3. Municipal Mayor's Office (local government) Interview
a. In general would you say that the health system in your area has improved, stayed the same or worsened in the past two years?
b. Would you say that the health infrastructure in your area has improved, stayed the same or worsened in the past two years?
c. Would you say that the hours that health care is available in your area have improved, stayed the same or worsened in the past two years?
d. Would you say that the courtesy/attitudes towards patients of health care professionals in your area has improved, stayed the same or worsened in the past two years?
e. Would you say that the availability of medications and supplies in your area has improved, stayed the same or worsened in the past two years?
f. Would you say that health counseling services in your area have improved, stayed the same or worsened in the past two years?
g. Would you say that services provided by Brigadistas in this municipality have improved, stayed the same or worsened in the past two years?
h. Would you say that services provided by TBAs in this municipality have improved, stayed the same or worsened in the past two years?
i. Do you know of any services or activities that were provided by the PH-MOH Chontales project? Can you name some?
j. What have been the most positive aspects of these activities? What about the negative aspects? How can the negatives be improved?
k Did you have the opportunity to participate in the planning or execution of the activities of the project?
l. Did you have the opportunity to participate in the development of the proposal, DIP or annual report for the project?
m. What could the local government do to better health services in this municipality?
n. What assistance is needed by the municipal government to improve the quality of health services?

o. Do you have any other comments you would like to make about health services in the area?

4. Trained Birth Attendants Interview
a. What types of activities have you participated in that were sponsored by PH-MOH?
b. Can you tell us how these activities have improved your work as a TBA?
c. Who has visited you to provide support in the past 3 months?
d. On what schedule are you receiving these visits?
e. What assistance do you receive from the MOH and other organizations to improve your work as TBAs?
f. Where do you obtain materials and supplies to maintain your stock?
g. How do you maintain a record of the birth and the event of the birth?
h. Where do you refer a pregnant woman with labor problems?
i. What problems do you seem most commonly in women in labor that cause you to refer? Have you ever known about a maternal death?
j. What are the main problems faced by you in attending to mothers?
k. Do you feel the support of your communities in your work? If so, give specific examples.
l. What recommendations could you give to us to better serve TBAs?
m. Do you have any other comments that you would like to make regarding the TBA system?

5. Elementary School Teachers Interviews (micronutrient and water and sanitation education)
a. Could you please describe the activities realized in coordination with PH-MOH in the last two years?
b. What type of trainings have you received? What trainings have you subsequently given and to whom?
c. When you have returned from a training, what specific plans have you conducted that were the result of the training, with your school children? Are these integrated into your teaching plan?
d. How would you rate the importance of these activities? What are the strengths? Weaknesses?
e. What have been the specific changes or benefits that you have observed as a result of these activities? In/to teachers, in/to communities, in/to students?
f. Has your school or community executed any health activities (other than those mentioned in the past questions)? Can you describe? Who participated and what results were realized?
g. Do you consider these activities as important. Specifically, why or why not? How could they be improved?
h. Do you or your school have health priorities that have not been addresses by the MOH or PH? How could these be realized in a cooperative manner by the groups?
i. Do you feel it would be of use for PH-MOH to develop a more permanent plan of action that included the educational centers?
j. Do you have any other comments that you would like to make about health education schools?

6. Supervisors of the CORUs (sub-set of Brigasistas) Interview
a. Could you explain to us the activities of the CORUs? What assistance do you receive to carry out these activities?
b. What type of trainings have you received from MOH-PH? What materials did you receive to do your job (please present)? When were these materials given to you?
c. The supplies and education materials that you have received, are they the most important to completing your job?
d. How would you rate the trainings and other support you have received? Have they been useful within your community?
e. Which have been the benefits or changes that you have observed in mothers or others in the community?
f. Do you assist in executing other health activities in the communities? Can you describe these and explain the results that were generated?
g. Do you consider these types of supported activities (between community and PH-MOH) to be important? Specifically why and how? How could they be improved?
h. What information do you give to mothers when you give them an ORS sachet?
i. Do you have ORS sachets in stock now? If yes, how many?
j. What other remedies do you recommend other than the ORS sachet? What do you recommend when the ORS runs out of stock?
k. What information is collected about the patient, the mother and the illness (please show book)?
l. Do you have any other comments you would like to make about the CORUs?

7. Supervisors of Community Pharmacies Interveiw
a. Could you explain to us the activities of the community pharmacies? What assistance do you receive to carry out these activities?
b. What type of trainings have you received from MOH-PH? What materials did you receive to do your job (please present)? When were these materials given to you?
c. The supplies and education materials that you have received, are they the most important to completing your job?
d. How would you rate the trainings and other support you have received? Have they been useful to you and to your community?
e. Which have been the benefits or changes that you have observed in mothers or others in the commuity?
f. Do you assist in executing other health activities in the communities? Can you describe these and explain the results that were generated?
g. Do you consider these types of supported activities (between community and PH-MOH) to be important? Specifically why and how? How could they be improved?
h. What information do you give to mothers when you give them an ORS sachet?
i. Do you have a lack of any pharmacy medications at this moment? Which ones? How long have you been without these?
j. In the past three months have you had stock-outs of any other medications? Which ones? For how long did the stock out last?
j. How do you replenish your stock of medications?

k. How often do you receive a visit from MOH-PH? Can you describe what took place during the last visit? Were you given any feed back that improved your ability to deliver services?
l. What information is collected about the patient, the mother and the illness (please show log book)?
m. Do you have any other comments that you would like to make regarding the community pharmacies?

8. Health Committee Members Interview
a. Could you describe the activities realized by the Health Committees? How are the activities coordinated with MOH-PH? What assistance have you received from MOH-PH?
b. What type of trainings have you received? What educational materials were used during the training?
c. The materials given to you for CORUs, etc., have they been the most useful for the purpose they were designed?
d. How would you rate these trainings and their subsequent outcomes? Have you seen any direct benefits you could describe at the community level?
e. What have been the benefits and the changes that you have observed?
f. Do you have any opinions about how the MOH-PH could better work with your committee to improve the development of workplans?
g. Do you have any other comments you would like to make about the health committees?

9. Adolescent Support Groups Interview
a. How long has the organization been in existence?
b. What type of trainings have you received?
c. Which themes discussed in the trainings have been of most interest to you?
d. Has the support group added on members since its initiation? Why has the group grown or decreased in size?
e. Do you think that pregnancy among adolescent girls continues to be a problem in Nicaragua? Why or why not?
f. Are there many opportunities to learn about health issues outside of this support group?
g. Have you ever invited a friend to be a part of this support group? Why or why not?
h. Can you describe what type of students have joined this support group?
i. How could we improve the support groups for adolescents to be sure important health messages get across to students?
j. Do you have other comments you would like to make about the support group?

10. Brigadistas (health volunteers) Interview
a. What is the training schedule?
b. Has it been possible for you to attend all of the trainings provided? Why or why not?
c. What motivated you to become a health volunteer?
d. Do you feel the support of the community in your work? How about the support of the MOH-PH?

e. When was the last time that you received a visit from MOH-PH staff?
f. Can you describe what happened during this visit?
g. Did the MOH-PH staff give you any advice that could improve your ability to serve your community? Why or why not?
h. What are the hours that you are available to community member providing services?
i. How many patients have you attended in the past week?
j. What is your biggest obstacle as a Brigadista?
k. Do you have a medications kits? If yes, what is in it? Are you out of stock of any medications? When was the last time you received stock for the kit?
l. How could the MOH-PH and community improve its support of your work to improve your services?
m. What other comments do you have regarding your role as a Brigadista?

11. Breastfeeding Support Groups
a. Could you describe to us the activities that you have realized in the last month as a mother's group?
b. What trainings have you received in the past year?
c. How could the training sessions be improved?
d. What benefits have you learned about with respect to mother's milk?
e. When an exclusively breastfed child had diarrhea is it better to give ORS or mother's milk?
f. Has this support grown in the recent past? Why or why not?
g. Do you have any specific ideas for improving these support groups?
h. Do you have any other comments about the breastfeeding group?

4. OBJECTIVES AND INDICATORS

Activities Completed in Yr 1 and Y2
Improve immunization coverage

Objective	Indicator	Measure-ment	Major planned activities	Completed year 1	Completed year 2	Programmed for Yr3 or 4
1. Increase complete immunization coverage rate from 65% to 80% (children 12-23mo)	Children 12-23 mo fully immunized/ all children 12-23mo with cards	Mid Term/ Final KPC	• Integrated visits to rural communities with low coverage rates	192 visits done out of 288	288 visits done out of 288	160 visits (in 20 months)
			• Help procurement of essential supplies	2 national health days supported.	2 national health days supported	4 additional NHDs to be supported
			• Educational messages through local radios		66 messages aired	1200 messages in 20 months
2. Increase from 85% to 90% the percentage of children having an immunization card	Children with immunization cards/ all children	Mid Term/ Final KPC	• Provide 11 000 immunization cards	No printings were made because the MOH had enough supply.		Donation conditional to MOH requirement
			• Educational messages- counseling during integrated visits to rural communities	5760 messages to mothers that went to integrated visits.	8640 messages to mothers that went to integrated visits	4800 messages to mothers attending to integrated visits.
			• Community based tracking		Improvement of immunization records in 2 municipals.	Improve immuniz. records from 40 community with low coverage

Improve feeding practices and nutritional status

Objective	Indicator	Measure-ment	Major planned activities	Completed Year 1	Completed Year 2	Programmed for Yr3 or 4
1. Increase from 17 to 30% the percentage of mothers exclusively breastfeeding their infant for the first six months		Mid Term/ Final KPC	▪ Set up 60 BF support groups for community-based counseling.		35 groups founded and functioning	Add 25 groups to meet the goal.
			▪ Train 160 MOH staff in their supervision. ▪ 9 baby-friendly health units and other facilities where deliveries occur. a) evaluation of knowledge and practices b) quality of services ▪ c) technical assistance for good BF counseling from UNICEF.		171 health personnel trained.	3 follow-on workshop to update information for trained health personnel
			▪ Development of 5 educational messages; dissemination of messages through local radio stations, follow-up to identify cultural barriers and impact.	Project did not broadcast radio messages. Messages were give to health personnel and community agents.		10 (2 for each intervention)
			▪ Development of 5 educational messages per year with MOH staff, volunteers communities, teachers, and others.	5 messages were developed through health personnel and community agents.		10 (2 for each intervention)
2. Increase from 50 to 75% the percent of children receiving BF during the first hour of birth	Receiving colostrum in the first hour/ total children in sample	Mid Term/ Final KPC	• Same as above	Same as above		10
3 Increase from 17 to 30% the percentage of children aged 20-23 months still breastfeeding	Children aged 20- 23 months still breastfeeding /total # of children 20- 23 months.	Mid Term/ Final KPC	• Same as above	Same as above		10

4. Reduce from 9.6 to 5% the prevalence of global malnutrition (weight for age<-2Z) in children below 6 years (no current indicator is available for children below 2 years of age)	Children with weight for age<-2Z/ total of children below 2 years old	Mid Term vs final survey ENDESA 98 . 2000, stratified by age; Anthropometric survey	▪ IEC, as above	None	1 anthropometrical survey	Objective was eliminated for years 3 and 4
			▪ Eight courses for MOH staff in supervision abilities to assess compliance with norms in health centers and posts		8 courses of AIN/IMCI	3 refreshment courses on AIN/ IMCI.
			▪ Set up a referral system for undernourished children/ at risk, starting with growth monitoring	None		Objective was eliminated for years 3 and 4.
6. Reduce from 28.5 to 15% the prevalence rate of anemia in children below 6 years of age (no current inicator is available for children below 2 years of age)	Children 6-23 months with anemia (hematocrit<33%)/ total sampled (6-23 mo.)	Mid Term vs final KPC	▪ Help to organize the distribution of Iron supplements for children 6-23 mo during health campaigns, twice a year	2 activities in the NHD/JNS	2 activities in the NHD/JNS	4 activities in the NHD/JNS
			▪ Provide (matching) antiparasitic drugs twice a year, to children 12-23 mo.	2 activities in the NHD/JNS	2 activities in the NHD/JNS	4 activities in the NHD/JNS
			▪ Develop educational messages about the relevance of iron, control at different levels: community, TBAs, health staff	8 workshops for health personnel.	19 workshops for communitarian agents.	16 workshops for community agents or health personnel
7. Increase from 70 to 90% the proportion of children with growth monitoring in the last 4 months, in children <2yr	Weighed in the last 4 mo/ children below 2 years with a growth chart	Mid Term/ Final KPC	▪ Providing 10,000 growth charts and train health personnel, brigadistas and mothers in their use	MOH reported enough supply of health cards. Instead, MOH suggested HOPE could supply 76,000 IMCI protocol formats.		
			▪ Supervise adherence to norms by MOH staff working at 51 health units in the project area, through a formal agreement between MOH, FORSAP HANDICAP and HOPE	45 supervisions to health units-AIN/IMCI	51 supervisions to health units-AIN/IMCI	102 supervisions to health units-AIN/IMCI
8. Increase the proportion of children eating a varied diet	3 or more food groups in the last 24 hr/total of children 12-23 mo.	MidTerm /final KPC	▪ IC: 5 new messages/year about the importance of a varied diet			20 messages and posters on benefit of Bactris gasipaes

			▪ Gardens, as above			10 messages to be developed.
			▪ Training of health staff see above			16 messages to be developed
9. Increase the proportion of children 12-23 months covering at least 90% RDA for micronutrients, iron and vitamin A	Percentage covering each RDA/ total sampled	Mid Term vs final	See above			20 messages on micronutrients to be developed
10. Increase from 18 to 40% the proportion of mothers who identify food sources rich in Vitamin A	Percent of mothers identifying 3 food sources for vit A/ total surveyed	Mid Term/ Final KPC	▪ 5 educational messages/year about dietary sources of Vitamin A		5 messages per year	5 messages per year
			▪ Promote nutritional counseling at community level in coordination with MIFIMILIA,MOH,HOPE,MECD at 65 infants feeding centers and 60 mothers clubs		11 workshops aimed to staff from 80 infants feeding centers.	4 workshops

Reduce morbidity and case fatality rates for diarrheal diseases and reduce associated rates of malnutrition

Objective	Indicator	Measure-ment	Major planned activities	Completed yr 1	Completed yr 2	Programmed Yr. 3&4
1 Reduce from 31% to 25% the percent of children <2yr experiencing diarrhea in the last 2 weeks	Children<2yr with history of diarrhea in the last 2 weeks/ all children <2 yr	Mid Term/ Final survey compared with baseline data	Educational messages about prevention (exclusive BF, personal and food hygiene, latrines, clean water)		32 workshops aimed to community agents-brigadistas.	32 workshops aimed to community agents-brigadistas
2. Increase from 39% to 50% the ORT use rate	Children<2yr receiving ORT/ all children <2yr with diarrhea	Mid Term/ Final survey compared with baseline data	• 200 CORUs	100 CORUs established	100 CORUs established	
			• Education of Mothers	350 mothers belonging to 35 BF support groups received messages about ORT.		250 mothers participating in 25 BF support groups.
3. Increase from 18 to 50% the percentage of mothers able to recognize danger (and dehydration) signs	Mothers recognizing danger signs/all mothers	Mid Term/ Final survey compared with baseline data	• Train brigadistas in community IMCI-based IMCI			200 brigadistas to be trained in community AIN/ IMCI.
4. Reduce from 71% to 50% the percentage of cases of diarrhea being treated with antibiotics/ antidiarrheal drugs.	Children<2yr with diarrhea receiving antibiotics/ antidiarrheals / all children <2yr with diarrhea	Mid Term/ Final survey compared with baseline data	• Train brigadistas in community-based IMCI			200 brigadistas to be trained in community AIN/ IMCI.

5. Increase from 3% to 20% the percent of mothers asking the brigadista for help when their children have diarrhea	Mothers asking the brigadista for help if their child have diarrhea/ all diarrhea cases	Mid Term/ Final survey compared with baseline data	• 200 CORUs	100 CORUs established	100 CORUs established	
			• Radio messages to generate demand	None		2 messages aired 60 times every month.
6. Increase from 45% to 60% the percentage of mothers giving the child more/equal amounts of liquids during diarrhea	Mothers giving more/equal amount of liquids during diarrhea/ all diarrhea cases	Mid Term/ Final survey compared with baseline data	• Training / supervision in community-based IMCI		40 district health workers trained in AIN/ IMCI management.	384 community agents to be trained in community AIN/ IMCI.
			• Educational messages through local radios	None		2 messages aired 60 times every month
			• 200 CORUs	100 CORU's established	100 CORU's established	CORU's Monitored
7. Increase from 51% to 70% the proportion of mothers who continued feeding the child during diarrhea	Mothers giving more/equal amount of food during diarrhea/ all diarrhea cases	Mid Term/ Final survey compared with baseline data	• Training / supervision in community-based IMCI		40 district health workers trained in AIN/ IMCI management	384 community agents trained and supervised by MOH staff
			• Educational messages through local radios	None		2 messages aired 60 times every month
			• 200 CORUs	100 CORU's established	100 CORU's established	

Reduce pneumonia case fatality ratio

Objective	Indicator	Measure-ment	Major planned activities	Completed yr 1	Completed Yr 2	Programmed Yr 3&4
1. Increase from 2% to 10% the proportion of mothers recognizing chest indrawing as a danger sign	Mothers able to recognize chest in drawing / all mothers	Mid Term vs final KPC	▪ Development of 5 educational messages			Objective elimina-ted: new MOH norms for community AIN/ IMCI focus only in fast breathing.
			▪ Disseminate messages through local radio stations.			
2. Increase from 45% to 80% the proportion of mothers able to recognize fast breathing as a danger sign	Mothers able to recognize fast breathing as a sign of danger/ all mothers	Mid Term vs final KPC	▪ Development of 5 educational messages.			2 messages aired 60 times every month
			▪ Disseminate those messages through local radio stations.			2 messages aired 60 times every month
			▪ Train MOH staff and brigadistas in IMCI (clinical/community)			270 trained, 200 brigadistas and 70 health workers
3. Increase to 80% the proportion of pneumonia cases treated according to the IMCI protocol	Cases of pneumonia managed according to IMCI protocols/ all pneumonia cases seen at MOH	Supervision (BASICS), review of medical records and pharmacy records	• train 75 MOH staff in clinical IMCI and 200 brigadistas in community based IMCI		241 health workers trained.	200 brigadistas to be trained
			• Supervision/training in health management at the 8 municipalities		40 district health workers trained in AIN/ IMCI management	

Reduce maternal mortality

Objective	Indicator	Measure-ment	Major planned activities			
1. Increase from 25 to 50% the proportion of mothers retaining their HCPB (basic perinatal record)	Mothers showing a HCPB / total number of mothers.	Mid Term/ Final KPC	• Have local radios broadcasting messages Provide MOH with 11000 HCPBS, supervise producer to have mothers retaining their cards	5000 HCPBS Supplied	5000 HCPBS Supplied	1584 messages to be aired. 1000 HCPBS to be supplied
2. Increase from 81 to 90% the proportion of pregnant women with at least one prenatal visit - among those with HCPB	Mothers having at least one prenatal visit / total number of mothers showing a HCPB (Cards)	Mid Term/ Final	• Develop and strength a monitoring and supervision system in 51 health units			102 supervi-sions in 51 health units
3. Increase from 56 to 70% the percent of mothers not desiring a pregnancy in the next two years using modern Family Planning (FP) methods	Mothers using modern FP methods/ total number of non-pregnant mothers desiring to stop or delay new pregnancies.	Mid Term/ Final KPC	• Promote modern FP methods at the community level, mothers clubs, and through brigadistas and TBAs.			
4. Reduce from 42 to 20% the percent of mothers found pregnant who are adolescents	Pregnant adolescents/ total number of mothers found pregnant during the survey	Mid Term/ Final KPC	• Train 50 rural teachers in FP and reproductive risks.		72 rural teachers trained in family planning and reproductive health.	
			• Design educational materials to be included into school curricula			
			• Set up a network (20+) of youth groups for FP counseling-focused on women at increased risk (i.e. those already united/already having had a pregnancy)		9 adolescent groups formed and functioning.	

5. Increase from 19% to 50% the proportion of mothers having at least one postnatal visit	Mothers with at least one postnatal visit / all mothers	Mid Term/ Final KPC	• Providing 11000 HCPB Training , supervision and monitoring of MOH staff and brigadistas	5000 HCPBS privided.	5000 HCPBS provided.	1000 HCPBS to be provided
			• Educational messages broadcast in local radios			2 daily radio messages.
6. Increase from 40% to 90% the proportion of mothers with 2+ doses of TT vaccine (among those with immunization cards)	Mothers with 2+ doses of TT vaccine/ mothers with HCPB (card)	Mid Term/ Final KPC	▪ Strengthen immunization campaigns (2/yr)	2 NHD/JNS	2 NHD/JNS	4 NHD/JNS
			▪ Disseminate health educational massages through local radio		66 messages aired	
			▪ Help procure 11000 immunization cards[1] and 44000 disposable syringes	2200 syringes donated.	50400 syringes donated.	
			▪ Reduce missed opportunities during contact with health system.			
7. Increase to 90% the proportion of mothers using iron supplements during the last pregnancy	Mothers using iron supplements in the last pregnancy/ mothers with HCPB	Mid Term/ Final KPC	• Help in the procurement of iron supplements	2 activities for year	2 activities for year	4 activities for year
			• MOH & TBA training		375✓	
			• Educational messages through local radio			1584 repetitions of messages
			• Set up a network of community pharmacies		2 community pharmacies	20[2]
8. Increase to 80% the percent of mothers using vitamin A supplements after giving birth	Mothers using vitamin A supplements after the last pregnancy/ mothers with HCPB	Mid Term/ Final KPC	• Help in the procurement of vitamin A supplements for women in their postpartum period.	2 activities for year.	2 activities for year.	4 activities in 2 years.
			• Educational messages through local radios.			2 messages repeated 60 times/ month
Capacity building						

[1] The immunization cards where not give it a way because the MOH had enough

✓ 171 health personnel + 204 TBA's

[2] Since the 3rd year will be promote the use of communitarian first Aid kit in place of communitarian pharmacies.

Indicators						
SILAIS and other partners attending regularly session of the department/district health committee, doing an annual plan, follow-up for adjustments every quarter	Sessions/year An annual plan Quarterly adjustments to the plan using available information	HOPE muni. Co-ordinators log books	Regular meetings; Joint planning and implementation of activities Joint M&E activities	40 planning meetings	40 planning meetings.	80 planning meeting
IMCI norms implemented	Number of facilities & community agents using IMCI	Supervision	Training and refresher training supervision		10 trainings	102 supervisions in 51 health unit
Health information system used in the process of decision-making	Qualitative, interviews	Supervision, checklist				
Mechanism as incentives to volunteers to developed	Reduction of drop-out rate to half	Supervision, checklist	Municipal and community meetings.	32 meetings district, hamlet level	32 meetings district, hamlet level	64 meetings district, hamlet level
A community-based way to distribute drugs with a cost recovery for those able to pay	% of families that paid for drugs in last disease episode of child	Interviews				
MOH and other partners involved in qualitative and epidemiological assessment of the impact of their activities on health/nutrition	Number of surveys/ other studies, quality of reports, use of the information in decision making	Mid Term/ Final survey.	Basic design will compare before and after interventions were carried out, intervened communities and communities outside the project area or those where the onset of interventions has to be delayed.			

5. ACTION PLAN

PROJECT HOPE
ACTION PLAN OF ACTIVITIES OF SEPTEMBER 2000 – SEPTEMBER 2002

ACTIVITIES	Months 2000				Months 2001												Months 2002							
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
1- SILAIS STRATEGIC PLAN																								
Participate in the elaboration of municipal strategic plan to integral the activities of HOPE support in realistic way.	X	X	X										X	X	X									
2- COMUNITARIAN IMCI INTERVENTION (DD, ARI, FEVER, NUTRITION, IMMUNIZATION and VPCD).																								
Train 16 municipal facilitators.			X																					
Train 54 Responsible of health post			X																					
Train 200 brigadistas CORUs responsible.				X	X	X																		
Monitoring and supervision (training) CORUs, first Aid Kit (33 X months)							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knowledge actualization of brigadistas and health post responsible.										X				X					X					
Actualization the facilitators.										X					X				X			X		
3 - INTERVENTION IEC																								
Distribution of imprinted materials (Glaxo Wellcome)								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Radio spot: Developed (2 for intervention)					X	X	X																	
Diffusion Radio spot (2 for intervention)					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HFA guides adapted to evaluate AIN / IMCI.	X	X	X																					

81

4- INTERVENTION : INTEGRAL VISITS (ACCOMPANIAMENT 10% OF THE LOCAL MOH PROGRAMMED)																								
Accompaniament of HOPE – MOH staff in the integral visits in the communities low covert to monitoring and supervisions the activities. (8 X month)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5- INTERVENTION: HEALTH CARE EVALUATION (HFA)																								
Survey LQAS technical to interventions differentiations.		X	X	X										X	X	X								
6- COST ANALISIS / PROGRAM EFICIENCE EPI.																								
Cost Analysis Developed: JNS, Integral Visits and Systematic. Send report to Municipal and SILAIS.	X	X																						
7- CHILDREN WITH ANEMIA FOLLOW																								
Monitoring children with anemia	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Report of study improvement				X	X																			
8-AUTO CAPACITATION OF PROJECT HOPE HR (National and international events, Internet)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9- DEVELOPE VIGILANCE SYSTEM / MONITORING (Brigadistas, TBA's, Integral visits)							X							X			X							
10- TRAIN 200 TBA's																								
Train facilitators		X																						
Train TBA's. Maternal care, partum, post partum and new born care.			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knowledge actualization of TBA's								X					X					X			X			

11- NATIONAL WORSHOP OF ANEMIA					X																			
12- HOPE CENTER VISIT TO CHONTALES (Technical and administrative)	X				X						X						X						X	
13- EXPERIENCE DOCUMENTATION. (Research report, Videos, photos, Publications, Presentations and internet)																								
Pharmacies experience documentation						X																		
First Aid kits experience documentation														X	X									
Family Gardens experience documentation								X	X															
Children story diagnostic with anemia experience documentation.				X	X																			
14- Successfully demonstrative communitarian first Aid kit (10 Santo Domingo, 10 Juigalpa)																								
Develop of functional documentation of the first Aid Kit			X	X																				
Candidate selection to assign the first Aid kit.					X																			
First Aid kit supply.						X	X	X	X	X	X	X	X											
First Aid kit monitoring and follow.						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15- TRIMESTRAL REPORT / YEARLY	T/A			T			T			T			T			T/A			X			X		
Coordination with partners		X			X			X			X			X			X			X			X	
Project HOPE finally evaluation																							X	X	X
Diffusion of the result	September 2002																							
Lesson learning																								

6. SPECIAL REPORTS

- Mid-term KPC Report

Quality Care, Intersectorial, Community-Driven Health Services Improvement Project For The Department of Chontales, Nicaragua

September 30, 1998 - August 30, 2000

Grant No. FAO-A-00-98-00018-00

MID TERM KPC SURVEY REPORT

August 2000

Submitted to:

U.S. Agency for International Development
Mission Office
Managua, Nicaragua

Submitted by:

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TABLE OF CONTENTS

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
CDD	Control of Diarrheal Disease
CHV	Community Health Volunteer
CS	Child Survival
DDS	District Health Office
DIP	Detailed Implementation Plan
EPI	Expanded Programme on Immunization
HIS	Health Information System
HIV	Human Immunodeficiency Virus
IEC	Information, Education, Communication
KPC	Knowledge, Practice and Coverage
MCH	Maternal Child Health
NGO	Non-Governmental Organization
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PVO	Private Voluntary Organization
TT	Tetanus Toxoid
USAID	U.S. Agency for International Development

EXECUTIVE SUMMARY

Between June 15th and 30th 2000, Project HOPE, with the participation of the local Ministry of Health (MINSA, SILAIS) and community members, conducted the midterm KPC survey of the Child Survival (CS) project funded by USAID in Chontales, Nicaragua. The survey was implemented in 30 rural communities of Chontales. The purpose of this survey was to 1) assess the knowledge and practices of mothers with children under two years of age in 30 clusters from rural communities; 2) compare this information with the results obtained in the baseline KPC survey; and 3) determine to what extent benchmarks set for the various objectives in the Detailed Implementation Plan (DIP) have been met.

This project was implemented by Project HOPE field staff in Chontales with technical and administrative support from HOPE Managua and Project HOPE's headquarters in Millwood, Virginia.

Project staff used the same survey instrument and 30-cluster methodology that was used in the KPC baseline survey plus questions related to obtaining information on anthropometry (weight, height) and iron status (Hemoglobin), with a total of 50 questions. The original version was developed by the former Child Survival Support Program (CSSP) of the Johns Hopkins University. Training on survey methodology was provided to the local staff, and additional support was provided by headquarters staff. Twelve interviews of mothers of children under two years of age were conducted in each of the 30 clusters. A total of 360 mothers were interviewed.

The original questionnaire was translated into Spanish, the local language spoken by all project beneficiaries, taking into account geographical, social, and cultural characteristics of the target population. Questions about community participation and interaction with community health volunteers were also added as well as variables on growth and development of the child.

Overall, target communities in Chontales have achieved improvements in knowledge and practices on breastfeeding. Since the sample size allows comparison only if the expected differences are larger than 5% (around half the size of the confidence interval), results are discussed as trends instead of evidence of significant progress:

The coverage of children fully protected against diseases prevented by immunizations is lower, probably as a consequence of a limited number of health campaigns (2/yr), less effort invested in routine immunization and a deficient HIS fed with unreliable denominators, overestimating the true coverage rate.

While rehydration therapy of diarrhea seems to have improved, and there is less abuse of antibiotics, dietary management of diarrhea must improve. The progress has been slower in teaching mothers to detect danger signs of diarrhea and pneumonia.

More mothers are using modern family planning methods. More mothers are protected with at least 2 TT doses; a higher proportion has a HCPB.

The prevalence of malnutrition (weight for age below percentile 3) was about 5% . Half of the children in the sample were found with anemia.

I. INTRODUCTION

A. Background

Project HOPE started this CS project in Nicaragua in 1998 as a collaborative effort with the Ministry of Health and local groups to improve maternal and child health of the rural populations of SILAIS Chontales, specifically in 8 municipalities (Cuapa, Santo Domingo, Villa Sandino, San Pedro de Lovago, Juigalpa, Santo Tomas and Nueva Guinea).

One of the two major strategies was community education and participation through the training supervision, and follow up of community health volunteers. The second major strategy included training and continuing education of DDS staff in the target area and assistance with improving planning, supervision, monitoring and information systems.

This KPC survey provides information about the knowledge and practices of mothers and children under two residing in the project target area. Information was collected from 30 rural clusters representing communities of the above-mentioned municipalities inside SILAIS Chontales. Because this is the midterm project survey, the results were compared to the baseline KPC survey conducted in November of 1999. Survey results provide an idea as to what extent and how maternal knowledge and practices have changed in the target communities and to see how the development implementation plan could be modified.

B. Objectives of the Survey

The survey was conducted to provide Project HOPE with the following information:

1. To provide the mothers of children under two years of age with the information they need about major health risks faced by their children in Nutrition, Breast feeding, ARI, Diarrhea, maternal health and immunization; and to compare the mid term survey with the base line survey.

2. Maternal practices for each of the above interventions.

3. Coverage rates of immunization and utilization of family planning methods.

The data of the KPC survey is being used by Project HOPE to assess the effectiveness of the interventions and technical assistance to the MOH health personnel during the past two years in changing health behaviors and improving demand for services.

C. Location and Population

The target population comprises the districts of Juigalpa, San Pedro de Lovago, Santo Tomas, Cuapa, Acoyapa, Villa Sandino, Nueva Guinea, with the territorial extension of 8,082 $Km^2$and the total population of 246,105 habitants.

D. Schedule of Activities for the KPC survey

Date	Activities
May 16, 17 and 21	Technical visit from HOPE HQ (LB) to train staff in standardization of measurements (weight, hemoglobin)
May 29- June 02	In-country preparations for the survey and training - Selection of communities - Sample size and other calculations - Planning, logistics
June 05 - 12	Training of supervisors and interviewers - Review of questionnaire - Review of survey procedures
June 12 -16	Continuation of training, pilot test - More review and feedback - Copying of questionnaire - Distribution of survey materials
June 19-30	Field work in selected clusters
June 26- July 2	Review of data collected, manual tabulation of data, and data entry into the computer
July 03-14	Preliminary data analysis and development of conclusions
July 17-21	Production of this report

II. METHODOLOGY

A. The Questionnaire

One questionnaire was used to conduct the survey of mothers with children less than 24 months of age. It contained 50 questions. See Attachment No **

Survey Instrument for Mothers with Children less than 24 Months

The first introductory questions collect general information, including ages, about the mother and child.
Questions 7-10: knowledge and practices of mothers in breast feeding and weaning practices.
Question 11: foods rich in vitamin A.
Question 12: iron-rich foods.
Questions 13 – 16: infant card and growth monitoring,
Questions 17 – 25: management of children with diarrhea bouts.
Questions 26- 31: knowledge and management of respiratory infections
Questions 32- 33: information on immunization coverage rates,
Questions 34- 47: information about prenatal care, delivery, post-natal and family planning.
Questions 48, 49 and 50 (see annex): infant anthropometry [weights, height and the hemoglobin of the child].

B. Determination of Sample Size

Sample sizes were calculated with the following formula:

$$n = Z^2 \, pq/d^2$$

where:

n = sample size
Z = statistical certainty chosen
p = estimated coverage or prevalence level/rate to be investigated;
q = 1 - p
d = level of precision or sampling error

The statistical certainty was chosen to be 95% (**Z** = 1.96). The value of **p** was defined as the coverage rate that requires the largest sample size (**p** = 0.5). The value of **d** depends on the precision or margin of error desired, which for this case was set at 10% (**d** = 0.1). Given the above values, the sample size (**n**) needed was determined to be:

$$\mathbf{n} = (1.96)^2 \, (0.5 \times 0.5) / (0.1)^2$$
$$\mathbf{n} = (3.84) \, (0.25) / 0.01$$
$$\mathbf{n} = 96$$

It takes much more time to randomly select an identified individual from a survey population, and then perform this selection 96 times to identify a sample of n = 96. Time can be saved by doing a 30 cluster sample survey in which several individuals within each cluster are selected to reach the required sample size.

However, in order to compensate for the bias introduced by interviewing persons in clusters rather than as randomly selected individuals, experience has shown, given the values of **Z**, **p**, and **d** above, that an average sample of 300 (10 per cluster) should be used.

The estimates of confidence limits for the survey results were calculated using the following formula:

$$\textbf{95\% confidence limit of } p = p \pm Z \sqrt{(pq)/n}$$

where:

p = proportion/rate in population found from survey
Z = statistical certainty chosen (if 95%, then Z = 1.96)
q = 1 - p
n = sample size

C. Selection of Clusters

Using the method previously described, 30 communities where selected.

D. Selection of the Sample

The sample consisted of 360 women with children 0-23 months of age in 30 communities. Once the survey teams reached the designated cluster site, the cluster was divided into four quadrants. One was selected spinning a pencil. The team moved to the center of the selected quadrant. After spinning the pencil a house was selected. Once the interviewer finished, the procedure was repeated to select another household. If the mother was not available at the time of the first visit, another house was selected using the same procedure.

E. Training of Supervisors and Interviewers

The training of supervisors and interviewers took place in three days, and two additional days of training in the survey anthropometrics. The training consisted of a lecture on survey methodology, KPC survey, discussion and practice exercises on the 30-cluster sampling methodology, selection of the first and consecutive households, identification of cluster boundaries, manual tabulation, and appropriate interviewing techniques. Select of four surveys- supervisors.

Selection of two field teams. Each team contained a coordinator, one supervisor, 8 interviewers, and four people to perform anthropometric measurements, biochemistry and other procedures.

The first day of training was to improve survey techniques, methodology and understanding of the KPC questionnaire, interviewing techniques, and how to identify the first house in a cluster. The first day of training ended with a role-play session and a field test of the questionnaire with different interviewing techniques.

The second day of training started with a discussion of the test interview performed on the previous day, as well as the role of the supervisors and interviewers. Finally, the second day ended with the identification and selection of clusters as well as the distribution and assignment of supervisors and interviewers of clusters. All the trained supervisors and interviewers participated in this final KPC survey.

F. Interviews

Supervisors of each team were responsible for the selection of the initial household and the geographical direction in which each team would proceed. The supervisors observed at least one complete interview by each interviewer each day. Each questionnaire was checked for completeness and consistency before the survey team left the survey area so that, in the case of missing or contradictory information, the mother could be re-interviewed the same day. In addition, all questionnaires were checked again for completeness and accuracy by the project staff at the end of each day and in the presence of the supervisors.

Describe antropometry
Salter scales, 25 kg capacity, 100g precision. Weight of clothes discounted (100g) when having light clothes.
Wooden infantometers calibrated daily.
Exercises of standardization were performed to measure precision and accuracy.
Hemoglobin: capillary blood samples were collected from the ring finger with disposable lancets. The third drop of blood was collected in fresh Hemocue cuvettes and the hemoglobin concentration measured immediately in a Hemocue hemoglobinometer.

G. Method for Data Entry and Analysis

The data were entered into the computer using Epi Info v. 6.04.b as soon as they were received at the HOPE office in Juigalpa. The basic descriptive information was preliminary analysis. Later on, a more comprehensive analysis was carried out at HOPE Center, where frequency distribution of the responses to each question were analyzed and some basic cross tabs calculated to develop second level indicators. After completing frequency distributions and cross tabs, tables and charts were developed to be included as part of the report. Results were compared with analysis done at baseline to measure the progress during the life of the project.
Antropometric indexes calculated with EpiInfo. Cut off-points chosen were those of the MOH
Weight for age (WFA):
Above percentile 97: overweight
P97-p15: normal
P15-p3: low reserves
Below percentile 3: low weight, undernourished
Height for age (HFA)
Below percentile 3: stunted
Hemoglobin: Children with a hemoglobin concentration below 11 g/dl were considered anemic.

III. RESULTS

Table 1: Key indicators

Objective	Baseline Level	Mid-term Level	Change*
1. EPI: Increase full immunization coverage from 65% to 80%.	65%	58%	-11%
2. EPI: Increase from 85% to 90% the percentage of children having an immunization card.	84%	87%	+4%
3. NUTR: Increase from 17% to 30% the percentage of mothers exclusively breastfeeding their infant to four months.	17%	33%	+48%
4. NUTR: Increase from 50% to 75% the percentage of children receiving BF during the first hour of birth.	50%	52%	+2%
5. NUTR: Increase from 17% to 30% the percentage of children who continue breastfeeding to 24 months.	17%	24%	+29%
6. NUTR: Reduce from 9.6% to 5% the prevalence of global malnutrition (wt/age) in children < 6 yrs of age.	10%+	6%	+40%
7. NUTR: Reduce the prevalence of anemia in children <2 years of age from 49% to 30%.**	----	49%	----
8. NUTR: Increase from 70% to 90 % the percentage of children under 2 years with growth monitoring in the past 4 months	70%	71%	+1%
9. NUTR: Increase the proportion of children eating a varied diet**	----	----	----
10. NUTR: Increase the proportion of children 12-23 mo covering at least 90% RDA for micronutrients, iron and VA**	----	----	----
11. NUTR: Increase from 16% to 40% the proportion of mothers who can identify food sources rich in vitamin A	16%	46%	+188%
12. DCM: Reduce from 31% to 25% the proportion of children <2 yr. Experiencing diarrhea in the last 2 weeks	31%	44%	-42%
13. DCM: Increase from 39% to 50% the ORT use rate	39%	25%	-36%
14. DCM: Increase from 18% to 50% the percentage of mothers able to recognize the danger signs of dehydration	18%	23%	+27%
15. DCM: Reduce from 71% to 50% the percentage of cases of diarrhea being treated with antibiotics/antidiarrheal drugs.	71%	50%	+30%
16. DCM: Increase from 3% to 20% the percentage of mothers asking the brigadistas for help when their children have diarrhea.	3%	6%	+100%
17. DCM: Increase from 45% to 60% the percentage of mothers who give their child more/equal amounts of liquid during diarrhea.	45%	53%	+18%
18. DCM: Increase from 50% to 70% the proportion of mothers who continued feeding their child during diarrhea.	51%	41%	-20%
19. PCM: Increase from 2% to 10% the proportion of mothers recognizing chest in-drawing as a danger sign.	2%	4%	+100%
20. PCM: Increase from 45% to 80% the proportion of	45%	58%	+29%

mothers able to recognize fast breathing as a danger sign of pneumonia.			
21. PCM: Increase to 80% the proportion of pneumonia cases treated according to IMCI protocols.**	----	----	----
22. MNC: Increase from 25 to 50% the proportion of mothers retaining their HCPB (health card).	25%	30%	+17%
23. MNC: Increase from 82% to 90% the proportion of pregnant women with at least two prenatal visits.	82%	82%	+0%
24. MNC: Increase from 56% to 70% the percentage of mothers not desiring a pregnancy in the next two years using modern family planning methods.	56%	62%	+11%
25. MNC: Reduce from to 20% the percentage of mothers found pregnant who are adolescents.	26%	10%	+62%
26. MNC: Increase from 24% to 40% the proportion of mothers with at least one postnatal visit.	25%	29%	+16%
27. MNC: Increase from 40% to 60% the proportion of mothers with at least 2 doses of TT.	40%	43%	+8%
28. MNC: Increase to 90% the proportion of mothers using iron supplements during the last pregnancy.**	----	47%	----
29. MNC: Increase to 80% the number of women using VA one month post-partum**	----	21%	----

* The change is calculated relative to the baseline value and then the movement towards(+) or away (-) from the objective is assigned as positive or negative.

** The objective was intended to be measured at midterm and final phases of the CSGP only. No baseline data is available.

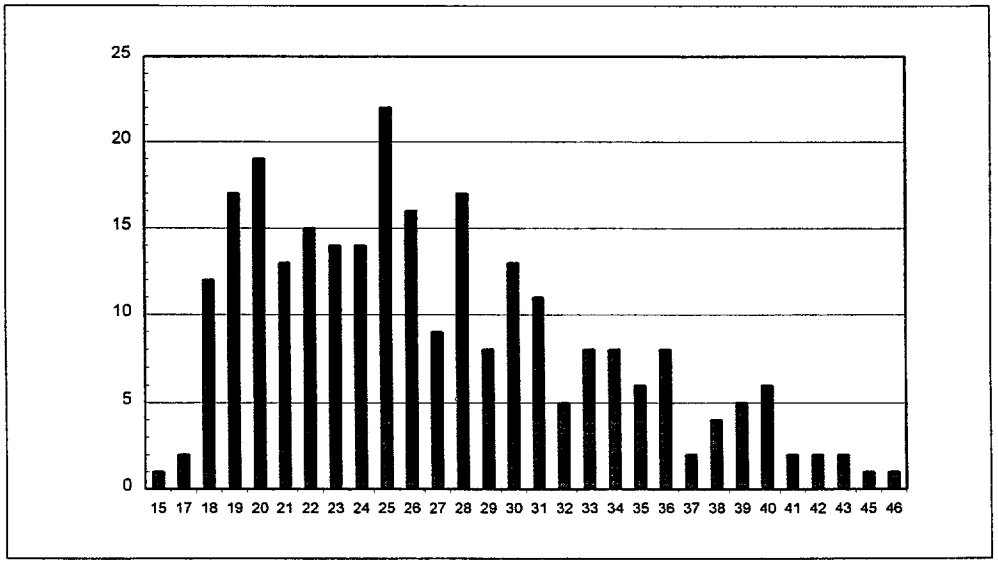
+ The baseline value for Objective 6 was estimated from the DHS-Chontales. No growth monitoring was done at baseline by Project Hope.

SURVEY OF MOTHERS WITH CHILDREN UNDER TWO

A. Age Distribution

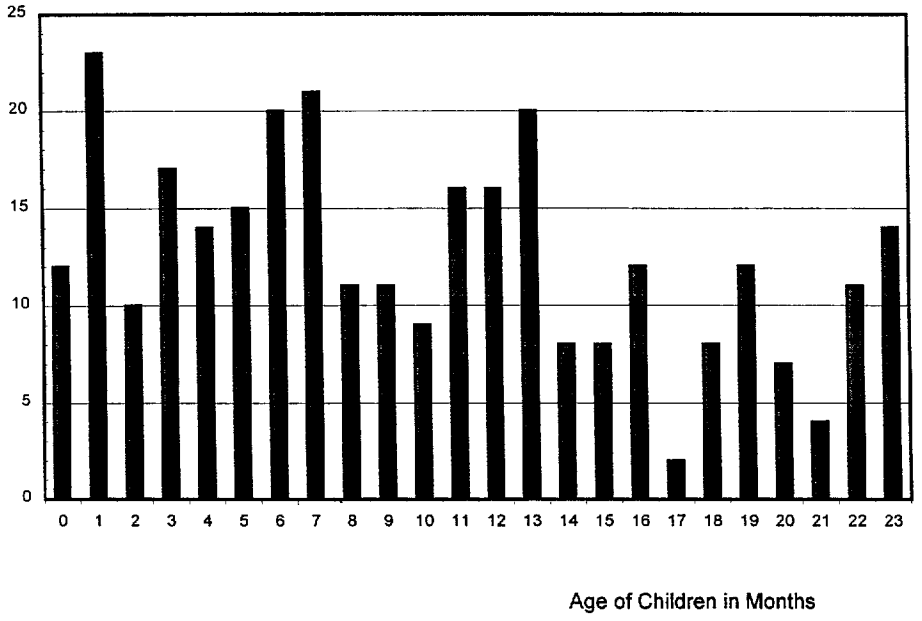
The mean age among surveyed mothers with children less than 24 months of age was 25 years. The number of mothers in the optimal age bracket for fertility was 303, 84.2%. 23 mothers (6.4%) were 18 years of age or younger, and 34, or 9.4% of mothers were 36 years or older.

Age Distribution of Mothers(n=360)



198 or 55% of surveyed children were under ten months of age. The mean age was 10.0 months.

Age Distribution of Children(n=301)



B. Education and Activities of the Mothers

The educational level is as follows: 127 (35.3%) were illiterate; 178 (49.4%) could read and write and 55 (15.3% had a high school educational level.

Out of the 360 mothers interviewed, 160 (29.4%) had paid work outside the house and 254 (70.6%) stayed in the house.

143 mothers (39.7%) said children were left with relatives if the mother leaves the home, 117 (32.5%) said the mother took the child with her, 61 of the children (16.9%) stayed with older siblings, 21 (5.8%) stayed with their father. 8 children (2.2%) were cared by a maid, 27 (7.5%) were left with neighbors or friends and 1 (0.3%) was left in a day-care facility.

C. Breastfeeding and Weaning

Out of the 360 mothers interviewed, 194 (53.9%) reported breastfeeding at the moment of the interview.

Of the 166 mothers that reported not to be breastfeeding at the moment of the survey, only 15 (9.0%) said they never had given breast milk to their child.

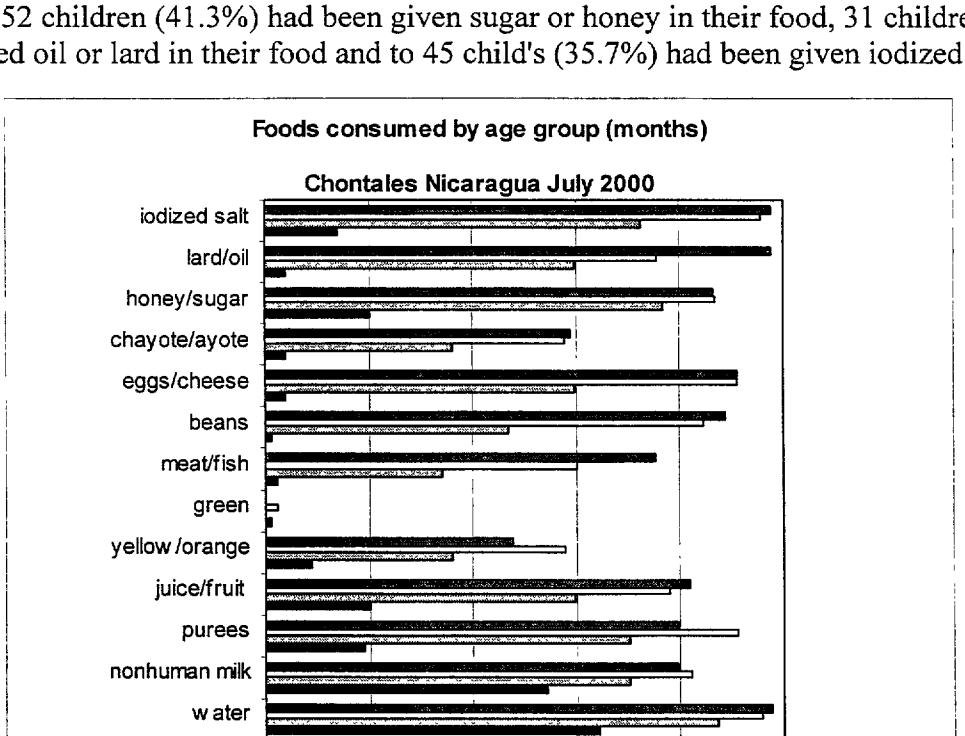
Of the 345 mothers that had given breast milk to their child, 165 (47.8%) started breast feeding in the first half hour after birth; 15 (4.3%) did in the second half hour; 40 (11.6%) started breast feeding their infant between 1 - 8 hours; and 121 (35.1%) started breast feeding 8 hours after giving birth. Four women (1.2%) were unable to recall this information.

If the analysis is restricted to children below 4 months of age (n=79), 26 (32.9%) had been given exclusive breast feeding

Out of 24 children between 20 and 24 months of age, 10 (24.4%) were still being breastfed.

D. Nutrition

48 children (38.0%) are being feed with soft food like gruels ("atoles") and purees, 24 children (19.0%) were being fed yellow/orange vegetables or fruits such as carrot, mangos and/or papaya, 44 (34.9%) had received juices or fruit, only one child (0.8%) had received dark green vegetables , 18 children (14.3%) had received meat or fish , 23 children (18.3%) had received beans or soy, 31 children (24.6%) had received eggs or cheese , 20 children (15.9%) had been given another vegetable, 52 children (41.3%) had been given sugar or honey in their food, 31 children (24.6%) had received oil or lard in their food and to 45 child's (35.7%) had been given iodized salt in their food.



E. Knowledge of vitamin A

When asked to name foods containing vitamin A to prevent night blindness, 217 (60.3%) said they did not know. 92 (25.6%) mentioned dark yellow fruits, 47 (13.1%) dark green vegetables, 9

(2.5%) meat or fish and 9 (2.5%) eggs yolk, 8 (2.2%) breastfeeding and 49 mothers (13.6%) mentioned others foods.

When asked to name foods rich in iron to prevent anemia in the children's, 226 (62.8%) responded they did not know, 71 (19.7%) mentioned beans, 29 (8.1%) green leaves, 16 (4.4%) liver, 8 (2.2%) soy, 6 (1.7%) butter and blood sausage respectively, 3 (0.8%), animal spleens, and 54 (15.0%) mentioned others foods.

F. Growth monitoring.

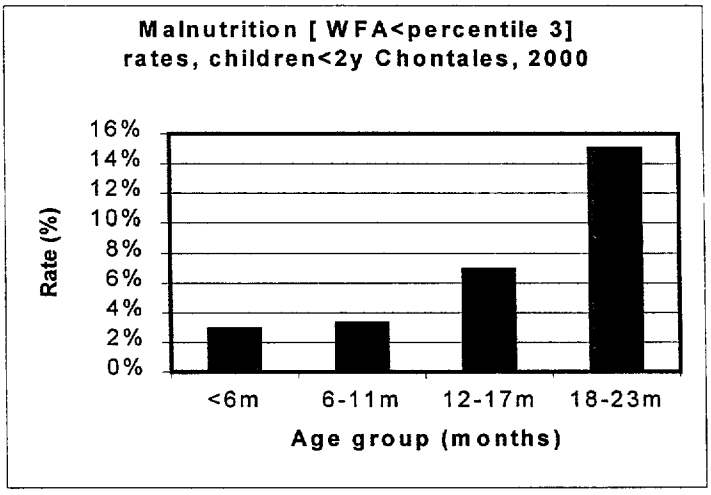
Out of 360 mothers, 314 (87.2%) produced a growth monitoring (GM) card, 11 (3.1%) reported having lost it, and 35 (9.7%) lacked a GM card at the moment of the survey.

Of the 314 children's with a GM card, 222 (70.7%) had been weighed in the last 4 months.

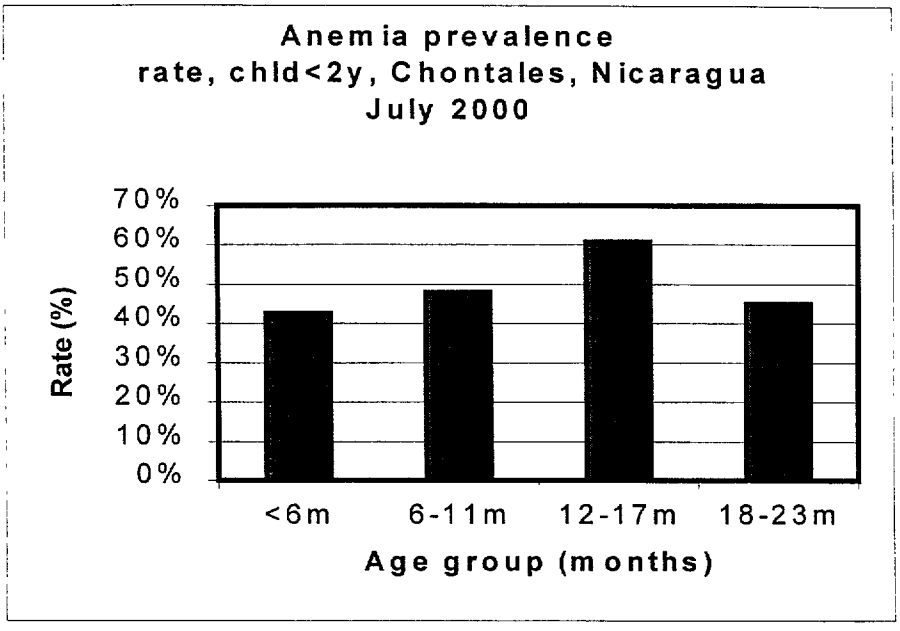
Of the 314 children's with GM cards, 304 (96.8%) had a space reserved to register vitamin A supplements. 38.5% of the latter had registered at least one vitamin A dose, 84 (26.8%) had received one dose of vitamin A, 31 (9.9%) received two doses of vitamin A, 5 received (1.6% three doses and 1 (0.3%) four doses.

In relation to the nutritional status, weight for age, no differences were found when calculating sex-specific rates:
Of 191 male children, 166 (86.9%) were normal, 11 (5.8%) undernourished and 14 (7.3%) were overweight. Of the 169 female children, 147 (87.0%) were found normal, 11 (6.5%) undernourished and 11 (6.5%) overweight.

In relation to stunting or growing retardation, 171 male children (89.5%) were found with normal height, 20 (10.5%) low height. Of 169 female children, 154 (91.2%) were found normal, 15 (8.9%) low height/ stunted. From the total number of children that had a hemoglobin test, 178 (49.4%) were anemic and 182 (50.6%) were not anemia.



The prevalence rate of anemia was higher in the 12-17m bracket (see chart)


Anemia prevalence
rate, child<2y, Chontales, Nicaragua
July 2000
70%
60%
50%
40%
30%
20%
10%
0%
Rate (%)
<6m
6-11m
12-17m
18-23m
Age group (months)

G. Diarrheal Diseases

160 out of 360 (44.4%) mothers in the midterm KPC survey stated that their children had had diarrhea within the two weeks prior to the survey. Of the 160 mothers who reported that their child had an episode of diarrhea in the previous two weeks, 13 (8.1%) reported giving them more breast feeding than usual. 48 (30.0%) gave the same amount of breast feeding as usual. 16 (10.0%) gave less breast feeding than usual. 77 (48.1%) of the children with diarrhea were not breast fed at the time of the study. 6 (3.8%) stopped breastfeeding.

Out of the 160 mothers whose children had diarrhea in the two weeks previous to the study, 17 (10.6%) reported giving more liquids than usual. 67 (41.9%) gave the same at usual, 52 (32.5%) less than usual, 5 (3.1%) did not give any kind of liquids, and 19 (11.9%) gave only breast feeding.

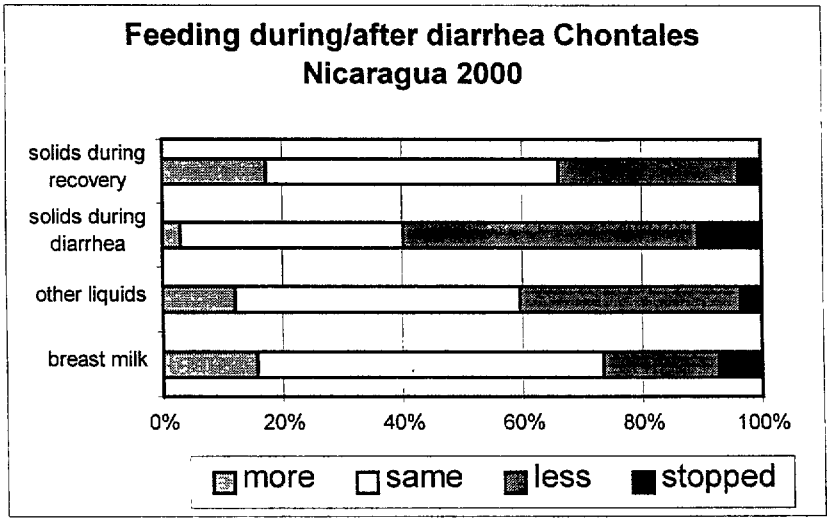
Out of the 160 children with diarrhea, 4 (2.5%) were given more food than usual, 49 (30.1%) same as usual, 65 (40.6%) less than usual, while 14 (8.8%) ceased being fed, 28 (17.5%) received only breast feeding.

During the recovery of diarrhea bouts; 23 (14.4%) of mothers said they gave more food with more frequency and in quantity, 65 (40.6%) give the same amount and frequency, 40 (25.0%) give less amount/frequency, 5 (3.1%) fasted the child, 27 (16.9%) gave only breast feeding.

Out of the 160 children with diarrhea 92 (57.5%) received anti-diarrheal and/or antibiotic treatment. 38 (23.8%) were given ORS, 1 (0.6%) receive homemade serum, 1 (90.6%) solutions with cereals or atole, 11 (25.6%) other treatments and 41 (25.6%) did not receive any treatment.

Out of the 160 mothers with children sick with diarrhea 100 (62.5%) sought help or advice, 55 went to health centers or posts, 10 went to private practitioners, 6 asked for help from a CHV, 2 from a faith-healer, 9 from a midwife, 16 asked for help from parents or friends, 4 went to the hospital, 1 went to a pharmacy.

When asked about the recognition dangers signs of diarrhea: 84 (23.3%) reported dehydration signs. 29 (8.1%) vomit, 40 (11.1%) fever, 14 (3.9%) protracted diarrhea, 71 (19.7%) weakness or lack of appetite, 33 (9.2%) blood in stools, 96 (26.7%) lost of appetite, 152 (42.2%) other symptoms. 50 mothers (13.9%) reported they could not name any diarrhea danger sings.



H. Respiratory Infections

When asked about symptoms and signs of respiratory infections, 230 mothers (63.9%) reported that their children had at least one in the previous two weeks. Of those, 157 (68.3%) reported that the children had respiratory stress.

Out of the 157 mothers that had children with respiratory stress/ difficult breathing, 116 (73.9%) sought help. 23 (19.8%) sought help the same day the symptoms started, 25 (21.6%) on the following day, 18 (15.5%) after two days, and 50 (43.1%) after three or more days.

Out of the 116 mothers that sought help, 80 (69.0%) went to a health center or post. 3 (2.6%) sought help from a CHV, 15 (12.9%) went to a private practitioner, 10 (8.6%) sought help from relatives or friends, 11 (9.5%) went to the hospital, 3 (2.6%) to a midwife, 1 (0.9%) to a faith healer, 1 (0.9%) to a pharmacy.

When asked to name danger signs of respiratory infection, 210 (58.3%) mentioned fast breathing, 14 (3.9%) chest indrawing, 75 (20.8%) fever, 86 (23.9%) cough, 57 (15.8%) lost of appetite, 47 (13.1%) did not know, 74 (20.6%) gave other answers (sad, weak, whining).

J. Immunizations

Of the 360 surveyed mothers with children under two, 316 (87.8%) produced a health/GM card, 14 (3.9%) had lost the cards, and 30 (8.9%) did not have a card at the time of the survey.

The following analysis is restricted to children in the range of 12-23 months of age.

OPV: 13 (8.0%) did not have any OPV vaccine, 6 (3.7%) had a single dose, 19 (11.75) received a second dose, 124 (76.5%) a third dose.

Regarding DPT, 13 (8.0%) did not have any doses of vaccine of DPT/ PENTAVALENTE, 6 (3.7%) out of the children's between 12- 23 months of age had a first dose, 24 (14.8%) had a second dose and 119 (73.5%) had a third dose.

Regarding measles/MMR vaccines, 106 (65.4%) of the children between 12 and 23 months of age had a dose.

The coverage rate for the complete protection among children between 12 and 23 months of age [OPV3, 3DPT3- *PENTAVALENTE*, measles /MMR, and BCG] was 94 (58.0%).

K. Maternal Health.

Of the total mothers interviewed, 109 (30.3%) had a maternal health card, 120 (33.3%) had lost it, and 131 (36.4%) did not have a card.

Of the mothers with a maternal health card 47 (43.1%) had received two or more doses of TT, 43 (39.4%) had received a single dose, while 19 (17.4%) had received none.

Of the mothers with a maternal health card, iron supplements had been given to 33 mothers (30.3%) in two or more prenatal visits, 18 (16.5%) received iron supplements in a single visit, while 58 (53.2%) did not receive any.

Of the 109 mothers showing their prenatal health card, 106 card had space to register pre-natal visits; 16 (15.1%) had recorded a single visit for prenatal care, 87 (82.1%) had two or more visits, 3 (2.8%) lacked registered pre-natal visits.

Of the 360 mothers interviewed, 21 (5.8%) were pregnant at the time of the interview.
Of the 339 non-pregnant mothers at the time of the interview, 268 (79.1%) said they did not want more children in the next two years, 31 (9.1%) were not sure, and 40 (11.8%) wanted another child in the next two years.

Of the total number [299] of mothers not sure/not willing to have a child in the next two years, 205 (68.6%) were using family planning methods.

Of the 205 mothers using some family planning method, 90 (43.9%) had received injections, 51 (24.9%) used pills, abstinence 2 (1.0%), 30 (14.6%) surgical sterilization, 18 (8.8%) exclusive breast feeding, 8 (3.9%) were using intrauterine device (DIU), 3 (1.5%) condoms, 1 (0.5%) rhythm method, vasectomy 2 (1.0%).

Of the 360 mothers interviewed, 310 (86.1%) reported they sought pre-natal care at a health center.

Of the 360 mothers interviewed, 192 (53.3%) had been seen by a health professional (nurse, and/or doctor), 107 (29.7%) by a TBA, 56 (15.6%) had been assisted for a family member, 1 (0.3%) by other person, 2 (0.6%) did not receive any help, and 2 (0.6%) did not remember.

Of the 360 mothers interviewed about postnatal care, 266 (73.9%) did not receive any, 93 (25.8%) went to a health facility and 1 (0.3%) don't remember.

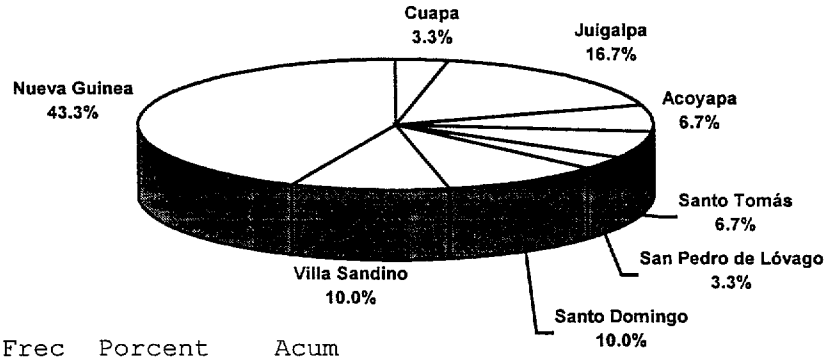
Of the 93 mothers that reported seeking help at a health facility for postnatal, 21 (22.6%) did so the first two days after giving birth, 21 (22.6%) between 2 - 10 days after birth, and 51 (54.8%) more than 10 days after giving birth.

Of the 360 mothers interviewed, 74 (20.6%) reported having received vitamin A supplements in the first month after birth, 281 (78.1%) did not receive any, and 5 (1.4%) could not recall.

Annex: Frequencies

MUNICIPIO	Frec	Porcent	Acum
CUAPA	12	3.3%	3.3%
JUIGALPA	60	16.7%	20.0%
ACOYAPA	24	6.7%	26.7%
SANTO TOMAS	24	6.7%	33.3%
SAN PEDRO DE LOVAGO	12	3.3%	36.7%
SANTO DOMINGO	36	10.0%	46.7%
VILLA SANDINO	36	10.0%	56.7%
NUEVA GUINEA	156	43.3%	100.0%
Total	360	100.0%	

Distribución de encuestas por municipio



AREA	Frec	Porcent	Acum
URBANA	155	43.1%	43.1%
RURAL	205	56.9%	100.0%
Total	360	100.0%	

GRUPOS EDAD MADRE (AÑOS)	Frec	Porcent	Acum
15-17	23	6.4%	6.4%
18-35	303	84.2%	90.6%
36 Ó MAS	34	9.4%	100.0%
Total	360	100.0%	

GRUPOS DE EDAD NIÑO (MESES)	Frec	Porcent	Acum
0-4	85	23.6%	23.6%
5-11	113	31.4%	55.0%
12 Ó MAS	162	45.0%	100.0%
Total	360	100.0%	

SEXO	Frec	Porcent	Acum
F	169	46.9%	46.9%
M	191	53.1%	100.0%
Total	360	100.0%	

Educación y ocupación de la madre:

¿Sabe leer y escribir.....Hasta que grado llegó?

RESPUESTAS	Frec	Porcent	Acum
NINGUNO	104	28.9%	28.9%
PRIMARIA Y NO LEE	23	6.4%	35.3%
PRIMARIA Y SI LEE	178	49.4%	84.7%
SECUNDARIA	50	13.9%	98.6%
TÉCNICO	1	0.3%	98.9%
UNIVERSITARIO	4	1.1%	100.0%
Total	360	100.0%	

¿Realiza alguna actividad fuera de su casa?

RESP	Frec	Porcent	Acum
SI	106	29.4%	29.4%
NO	254	70.6%	100.0%
Total	360	100.0%	

¿Realiza algún trabajo para ganar dinero, durante el año?

Respuestas	Frecuencia	Porcentaje	Acum.
Nada	258	71.3%	71.3%
Artesanía / tejido /, etc.	4	1.1%	72.4%
Agricultura	11	3.0%	75.4%
Ganadería	1	0.3%	75.7%
Vendiendo comidas / productos preparados	22	6.1%	81.8%
Servicios domésticos	39	10.8%	92.5%
Dueño de tienda / pulpería	11	3.0%	95.6%
Trabajador asalariado	13	3.6%	99.2%
Otros	3	0.8%	100.0%
Total	362	100.0%	

¿Quién cuida a **(nombre del niño)** mientras Ud. trabaja o está fuera de su casa?

Respuestas	SI	Porcentaje	Acum.
El niño va con la mamá	117	31.0%	31.0%
El esposo / compañero	21	5.6%	36.5%
Hermanos mayores	61	16.1%	52.6%
Parientes	143	37.8%	90.5%
Vecinos / Amigos	27	7.1%	97.6%
Empleada doméstica	8	2.1%	99.7%
CDI / SIR	1	0.3%	100.0%
Total	378	100.0%	

Lactancia materna y nutrición:

¿Le está dando de mamar a **(nombre del niño)** ahora?

RESP	Frec	Porcent	Acum
SI	194	53.9%	53.9%
NO	166	46.1%	100.0%
Total	360	100.0%	

¿Le ha dado alguna vez de mamar a **(nombre del niño)**?

RESP	Frec	Porcent	Acum
SI	151	91.0%	91.0%
NO	15	9.0%	100.0%
Total	166	100.0%	

Después del parto, ¿Cuándo le dio de mamar por primera vez a **(nombre del niño)**?

DURANTE LA	Frec	Porcent	Acum
1ra MEDIA HORA	165	47.8%	47.8%
2da MEDIA HORA	15	4.3%	52.2%
1-8 HORAS	40	11.6%	63.8%
MAS DE 8 HORAS	121	35.1%	98.8%
NO SE ACUERDA	4	1.2%	100.0%
Total	345	100.0%	

¿Qué alimentos contienen vitamina "A" para la prevención de la ceguera nocturna?

Respuestas	SI	Porcentaje	Acum.
No sabe	217	50.3%	50.3%
Vegetales verdes	47	10.9%	61.3%
Frutas de color amarillo intenso	92	21.3%	82.6%
Carne / Pescado	9	2.1%	84.7%
Lactancia materna	8	1.9%	86.5%
Yema de huevos	9	2.1%	88.6%
Otros	49	11.4%	100.0%
Total	431	100.0%	

¿Qué alimentos ricos en hierro conoce Ud. para prevenir la anemia en los niños?

Respuestas	SI	Porcentaje	Acum.
No sabe	226	53.8%	53.8%
Moronga	6	1.4%	55.2%
Bazo de cerdo	1	0.2%	55.5%
Mantequilla	6	1.4%	56.9%
Bazo de res	3	0.7%	57.6%
Hojas verdes	29	6.9%	64.5%
Frijoles	71	16.9%	81.4%
Soya	8	1.9%	83.3%
Hígado de res	16	3.8%	87.1%
Otros	54	12.9%	100.0%
Total	420	100.0%	

¿Tiene **(nombre del niño)** su tarjeta infantil para el control del peso?

RESPUESTAS	Frec	Porcent	Acum
SI	314	87.2%	87.2%
PERDIO CARNET	11	3.1%	90.3%
NO	35	9.7%	100.0%
Total	360	100.0%	

Mire el carnet del niño y registre la siguiente información:
Ha sido pesado el niño en los últimos 4 meses

RESP	Frec	Porcent	Acum
SI	222	70.7%	70.7%
NO	92	29.3%	100.0%
Total	314	100.0%	

Mire también la tarjeta de control de crecimiento e indique si hay espacio para registrar las cápsulas con vitamina "A".

RESP	Frec	Porcent	Acum
SI	304	96.8%	96.8%
NO	10	3.2%	100.0%
Total	314	100.0%	

¿Ha tenido **(nombre del niño),** diarrea en las dos últimas semanas?

RESPUESTAS	Frec	Porcent	Acum
SI	160	44.4%	44.4%
NO	198	55.0%	99.4%
NO SABE	2	0.6%	100.0%
Total	360	100.0%	

Cuando **(nombre del niño),** tenía diarrea, ¿Le dio de mamar?

RESPUESTAS	Frec	Porcent	Acum
MAS	13	8.1%	8.1%
IGUAL	48	30.0%	38.1%
MENOS	16	10.0%	48.1%
PARO COMPLETAMENTE	6	3.8%	51.9%
YA NO LE DABA PECHO	77	48.1%	100.0%
Total	160	100.0%	

Cuando **(nombre del niño),** tenía diarrea, ¿Le dio otros líquidos además de su pecho?

RESPUESTAS	Frec	Porcent	Acum
MAS	17	10.6%	10.6%
IGUAL	67	41.9%	52.5%
MENOS	52	32.5%	85.0%
DEJO DE DARLE COMPLETAMENTE	5	3.1%	88.1%
SOLO PECHO	19	11.9%	100.0%
Total	160	100.0%	

Cuando **(nombre del niño),** tenía diarrea, ¿Le dio alimentos suaves o purés?

RESPUESTAS	Frec	Porcent	Acum
MAS	4	2.5%	2.5%
IGUAL	49	30.6%	33.1%
MENOS	65	40.6%	73.8%
DEJO DE DARLE COMPLETAMENTE	14	8.8%	82.5%
SOLO PECHO	28	17.5%	100.0%
Total	160	100.0%	

Cuando **(nombre del niño),** se estaba recuperando de la diarrea, ¿Le dio alimentos suaves o purés?

RESPUESTAS	Frec	Porcent	Acum
MAS	23	14.4%	14.4%
IGUAL	65	40.6%	55.0%
MENOS	40	25.0%	80.0%
DEJO DE DARLE COMPLETAMENTE	5	3.1%	83.1%
SOLO PECHO	27	16.9%	100.0%
Total	160	100.0%	

Cuando **(nombre del niño)** tuvo diarrea, ¿Dio algún tratamiento? ¿Cuál?

Respuestas	Sí	Porcentaje	Acum.
Nada	41	22.3%	22.3%
Sobre de rehidratación oral (SRO)	38	20.7%	42.9%
Solución de agua y sal (suero casero)	1	0.5%	43.5%
Soluciones a base de cereales o atoles	1	0.5%	44.0%
Medicinas anti-diarréicas o antibióticos	92	50.0%	94.0%
Otros	11	6.0%	100.0%
Total	184	100.0%	

Cuando **(nombre del niño)** tuvo diarrea, ¿Pidió consejo o ayuda?

RESP	Frec	Porcent	Acum
SI	100	62.5%	62.5%
NO	60	37.5%	100.0%
Total	160	100.0%	

¿Dónde pidió el consejo o ayuda para la diarrea de **(nombre del niño)**?

Respuestas	Frecuencia	Porcentaje	Acumulado
Hospital general	4	3.9%	3.9%
Centro de salud	55	53.4%	57.3%
Médico / clínica particular	10	9.7%	67.0%
Farmacia	1	1.0%	68.0%
Brigadista de salud / URO	6	5.8%	73.8%
Curandero	2	1.9%	75.7%
Partera	9	8.7%	84.5%
Parientes o amigos	16	15.5%	100.0%
Total	103	100.0%	

Cuando **(nombre del niño)** está con diarrea, ¿Cómo se da cuenta que está grave?

Respuestas	SI	Porcentaje	Acum.
No sabe	50	8.7%	8.7%
Vómitos	29	5.0%	13.7%
Fiebre	40	6.9%	20.7%
Somnoliento, ojos hundidos, pliegue / piel, bebe con sed, inquieto / irritable	84	14.6%	35.2%
Mollera hundida	4	0.7%	35.9%
Orina poco	3	0.5%	36.5%
Diarrea prolongada (más de 14 días)	14	2.4%	38.9%
Sangre en las heces	33	5.7%	44.6%
Pérdida del apetito	96	16.7%	61.3%
Débil o desganado	71	12.3%	73.6%
Otros	152	26.4%	100.0%
Total	576	100.0%	

Enfermedades respiratorias

¿Ha estado **(nombre del niño)** enfermo con tos o problemas respiratorios en las dos últimas semanas?

RESP	Frec	Porcent	Acum
SI	230	63.9%	63.9%
NO	130	36.1%	100.0%
Total	360	100.0%	

¿Ha estado **(nombre del niño)** con dificultad en respirar, o respiraba como cansado (disnea), cuando enfermó?

RESP	Frec	Porcent	Acum
SI	157	68.3%	68.3%
NO	73	31.7%	100.0%
Total	230	100.0%	

¿Ha pedido Ud. consejo o ayuda para **(nombre del niño)** cuando estuvo enfermo con tos y dificultad respiratoria?

RESP	Frec	Porcent	Acum
SI	116	73.9%	73.9%
NO	41	26.1%	100.0%
Total	157	100.0%	

¿Cuánto tiempo después llevó a **(nombre del niño)** para el tratamiento contra la tos / respiración rápida?

RESPUESTA	Frec	Porcent	Acum
EL MISMO DIA	23	19.8%	19.8%
AL SIGUIENTE DIA	25	21.6%	41.4%
A LOS DOS DIAS	18	15.5%	56.9%
TRES O MAS DIAS	50	43.1%	100.0%
Total	116	100.0%	

¿Dónde recibió consejo o ayuda para la tos y dificultad respiratoria de **(nombre del niño)**?

Respuestas	Frecuencia	Porcentaje	Acumulado
Hospital general	11	8.9%	8.9%
Centro de salud	80	64.5%	73.4%
Médico / clínica particular	15	12.1%	85.5%
Farmacia	1	0.8%	86.3%
Brigadista de salud / URO	3	2.4%	88.7%
Curandero	1	0.8%	89.5%
Partera	3	2.4%	91.9%
Parientes o amigos	10	8.1%	100.0%
Total	124	100.0%	

Cuando **(nombre del niño)** está con una enfermedad respiratoria, ¿Cómo se da cuenta que (**nombre del niño**) está grave?

Respuestas	SI	Porcentaje	Acum.
No sabe	47	8.3%	8.3%
Respiración rápida y agitada	210	37.3%	45.6%
Retracciones inter-costales	14	2.5%	48.1%
Pérdida del apetito	57	10.1%	58.3%
Fiebre	75	13.3%	71.6%
Tos	86	15.3%	86.9%
Otros	74	13.1%	100.0%
Total	563	100.0%	

Inmunizaciones

¿Tiene Ud. la tarjeta de vacunas de **(nombre del niño)**?

RESPUESTAS	Frec	Porcent	Acum
SI	316	87.8%	87.8%
PERDIO EL CARNET	14	3.9%	91.7%
NO	30	8.3%	100.0%
Total	360	100.0%	

Salud Materna

¿Tiene Ud. su tarjeta de control de embarazo?

RESPUESTAS	Frec	Porcent	Acum
SI	109	30.3%	30.3%
PERDIO LA TARJETA	120	33.3%	63.6%
NO	131	36.4%	100.0%
Total	360	100.0%	

Mire la tarjeta de control de embarazos y registre el número de vacunas TT o DT en el espacio correspondiente:

RESPUESTAS	Frec	Porcent	Acum
NINGUNA	19	17.4%	17.4%
UNA	43	39.4%	56.9%
DOS O MAS	47	43.1%	100.0%
Total	109	100.0%	

Mire la tarjeta de control de embarazos y registre el número de veces que ha recibido suplemento de hierro:

RESPUESTAS	Frec	Porcent	Acum
NINGUNA	58	53.2%	53.2%
UNA	18	16.5%	69.7%
DOS O MAS	33	30.3%	100.0%
Total	109	100.0%	

Tiene la tarjeta de control de embarazos espacios para anotar visitas pre-natales:

RESP	Frec	Porcent	Acum
SI	106	97.2%	97.2%
NO	3	2.8%	100.0%
Total	109	100.0%	

Si es sí, ¿Cuántas veces fue la madre a visitas prenatales?

RESPUESTAS	Frec	Porcent	Acum
UNA	16	15.1%	15.1%
DOS O MAS	87	82.1%	97.2%
NINGUNA	3	2.8%	100.0%
Total	106	100.0%	

¿Está Ud. ahora embarazada?

RESP	Frec	Porcent	Acum
SI	21	5.8%	5.8%
NO	339	94.2%	100.0%
Total	360	100.0%	

¿Quisiera Ud. tener otro hijo en los próximos dos años?

RESPUESTAS	Frec	Porcent	Acum
SI	40	11.8%	11.8%
NO	268	79.1%	90.9%
NO SABE	31	9.1%	100.0%
Total	339	100.0%	

¿Está Ud. planificando su familia?

RESP	Frec	Porcent	Acum
SI	205	68.6%	68.6%
NO	94	31.4%	100.0%
Total	299	100.0%	

¿Cuál es el método principal de planificación que Ud. o su esposo están usando?

RESPUESTAS	Frec	Porcent	Acum
ELLA ESTA OPERADA	30	14.6%	14.6%
VASECTOMÍA	2	1.0%	15.6%
INYECCIONES	90	43.9%	59.5%
PASTILLAS ANTICONCEPTIVAS	51	24.9%	84.4%
DIU	8	3.9%	88.8%
CONDONES	3	1.5%	89.8%
LME	18	8.8%	98.5%
METODO DEL RITMO	1	0.5%	99.0%
ABSTINENCIA	2	1.0%	100.0%
Total	205	100.0%	

Cuando ud. estaba embarazada de **(nombre del niño)**, ¿Visitó algún centro de salud (clínica u hospital) para su control del embarazo?

RESP	Frec	Porcent	Acum
SI	310	86.1%	86.1%
NO	50	13.9%	100.0%
Total	360	100.0%	

Cuando nació (nombre del niño), **¿Quién le amarró y cortó el ombligo?**

RESPUESTAS	Frec	Porcent	Acum
ELLA MISMA	2	0.6%	0.6%
UN MIEMBRO DE LA FAMILIA	56	15.6%	16.1%
PARTERA	107	29.7%	45.8%
PERSONAL DE SALUD	192	53.3%	99.2%
NO SABE	2	0.6%	99.7%
OTROS	1	0.3%	100.0%
Total	360	100.0%	

¿Se realizó Ud. un chequeo de su salud después que nació (**nombre del niño**)?

RESPUESTAS	Frec	Porcent	Acum
SI	93	25.8%	25.8%
NO	266	73.9%	99.7%
NO RECUERDA	1	0.3%	100.0%
Total	360	100.0%	

¿Cuántos días o semanas después del parto tuvo lugar el primer chequeo?

RESPUESTAS	Frec	Porcent	Acum
PRIMEROS 2 DIAS	21	22.6%	22.6%
DE 2 - 10 DIAS	21	22.6%	45.2%
MAS DE 10 DIAS	51	54.8%	100.0%
Total	93	100.0%	

En el primer mes después del parto, ¿Usted recibió una dosis de vitamina "A" como esta?

RESPUESTAS	Frec	Porcent	Acum
SI	74	20.6%	20.6%
NO	281	78.1%	98.6%
NO SABE	5	1.4%	100.0%
Total	360	100.0%	

ANTROPOMETRÍA

	PESO			
SEXO	NORMAL	DESNUTRIDO	SOBRE PESO	TOTAL
MASCULINO	166	1	14	191
	86.9%	5.8	7.3%	53.1%
	53.0%	50.0	56.0%	
FEMENINO	147	1	11	169
	87.0%	6.5	6.5%	46.9%
	47.0%	50.0	44.0%	
TOTAL	313	2	25	360
	86.9%	6.1	6.9%	

	TALLA (ESTATURA)			
SEXO	NORMAL	BAJA	ALTA	TOTAL
MASCULINO	166	20	5	191
	86.9%	10.5%	2.6%	53.1%
	52.5%	57.1%	55.6%	
FEMENINO	150	15	4	169
	88.8%	8.9%	2.4%	46.9%
	47.5%	42.9%	44.4%	
TOTAL	316	35	9	360
	87.8%	9.7%	2.5%	

	ANEMIA		
SEXO	SI	NO	TOTAL
MASCULINO	97	94	191
	50.8%	49.2%	53.1%
	54.5%	51.6%	
FEMENINO	81	88	169
	47.9%	52.1%	46.9%
	45.5%	48.4%	
TOTAL	178	182	360
	49.4%	50.6%	

Feeding patters

GRUPO EDAD (MESES)	AGUA O COCIMIENTO SI	NO	Total
0 - 3	51	28	79
	> 64.6%	35.4%	> 21.9%
	15.8%	75.7%	
4-6	41	6	47
	> 87.2%	12.8%	> 13.1%
	12.7%	16.2%	
7-9	43	2	45
	> 95.6%	4.4%	> 12.5%
	13.3%	5.4%	
10-12	43	1	44
	> 97.7%	2.3%	> 12.2%
	13.3%	2.7%	
13 Ó MAS	145	0	145
	> 100.0%	0.0%	> 40.3%
	44.9%	0.0%	
Total	323	37	360
	89.7%	10.3%	

GRUPO EDAD (MESES)	COMIDA SUAVE COMO ATOLES, PURES O CEREALES SI	NO	Total
0 - 3	15	64	79
	> 19.0%	81.0%	> 21.9%
	6.6%	48.5%	
4-6	33	14	47
	> 70.2%	29.8%	> 13.1%
	14.5%	10.6%	
7-9	41	4	45
	> 91.1%	8.9%	> 12.5%
	18.0%	3.0%	
10-12	35	9	44
	> 79.5%	20.5%	> 12.2%
	15.4%	6.8%	
13 Ó MAS	104	41	145
	> 71.7%	28.3%	> 40.3%
	45.6%	31.1%	
Total	228	132	360
	63.3%	36.7%	

GRUPO EDAD (MESES)	LECHE DE VACA, DE CABRA O EN POLVO SI	NO	Total
0 - 3	43	36	79
	> 54.4%	45.6%	> 21.9%
	16.4%	36.7%	
4-6	33	14	47
	> 70.2%	29.8%	> 13.1%
	12.6%	14.3%	
7-9	37	8	45
	> 82.2%	17.8%	> 12.5%
	14.1%	8.2%	
10-12	35	9	44
	> 79.5%	20.5%	> 12.2%
	13.4%	9.2%	
13 Ó MAS	114	31	145
	> 78.6%	21.4%	> 40.3%
	43.5%	31.6%	
Total	262	98	360
	72.8%	27.2%	

GRUPO EDAD (MESES)	JUGOS O FRUTAS SI	NO	Total
0 - 3	16	63	79
	> 20.3%	79.7%	> 21.9%
	6.8%	50.4%	
4-6	28	19	47
	> 59.6%	40.4%	> 13.1%
	11.9%	15.2%	
7-9	35	10	45
	> 77.8%	22.2%	> 12.5%
	14.9%	8.0%	
10-12	36	8	44
	> 81.8%	18.2%	> 12.2%
	15.3%	6.4%	
13 Ó MAS	120	25	145
	> 82.8%	17.2%	> 40.3%
	51.1%	20.0%	
Total	235	125	360
	65.3%	34.7%	

GRUPO EDAD (MESES)	ZANAHORIAS, AYOTE, MANGOS O PAPAYA SI	NO	Total
0 - 3	7	72	79
	8.9%	91.1%	21.9%
	4.0%	38.7%	
4-6	17	30	47
	36.2%	63.8%	13.1%
	9.8%	16.1%	
7-9	26	19	45
	57.8%	42.2%	12.5%
	14.9%	10.2%	
10-12	21	23	44
	47.7%	52.3%	12.2%
	12.1%	12.4%	
13 Ó MAS	103	42	145
	71.0%	29.0%	40.3%
	59.2%	22.6%	
Total	174	186	360
	48.3%	51.7%	

GRUPO EDAD (MESES)	CARNE O PESCADO SI	NO	Total
0 - 3	2	77	79
	2.5%	97.5%	21.9%
	1.0%	51.0%	
4-6	16	31	47
	34.0%	66.0%	13.1%
	7.7%	20.5%	
7-9	27	18	45
	60.0%	40.0%	12.5%
	12.9%	11.9%	
10-12	33	11	44
	75.0%	25.0%	12.2%
	15.8%	7.3%	
13 Ó MAS	131	14	145
	90.3%	9.7%	40.3%
	62.7%	9.3%	
Total	209	151	360
	58.1%	41.9%	

GRUPO EDAD (MESES)	VEGETALES VERDES COMO HOJAS DE YUCA, RABANO O ESPINACA SI	NO	Total
0 - 3	1	78	79
	1.3%	98.7%	21.9%
	5.9%	22.7%	
4-6	0	47	47
	0.0%	100.0%	13.1%
	0.0%	13.7%	
7-9	1	44	45
	2.2%	97.8%	12.5%
	5.9%	12.8%	
10-12	0	44	44
	0.0%	100.0%	12.2%
	0.0%	12.8%	
13 Ó MAS	15	130	145
	10.3%	89.7%	40.3%
	88.2%	37.9%	
Total	17	343	360
	4.7%	95.3%	

GRUPO EDAD (MESES)	FRIJOLES O SOYA SI	NO	Total
0 - 3	1	78	79
	1.3%	98.7%	21.9%
	0.4%	63.9%	
4-6	22	25	47
	46.8%	53.2%	13.1%
	9.2%	20.5%	
7-9	38	7	45
	84.4%	15.6%	12.5%
	16.0%	5.7%	
10-12	39	5	44
	88.6%	11.4%	12.2%
	16.4%	4.1%	
13 Ó MAS	138	7	145
	95.2%	4.8%	40.3%
	58.0%	5.7%	
Total	238	122	360
	66.1%	33.9%	

GRUPO EDAD (MESES)	HUEVO, CUAJADA O QUESO SI	NO	Total
0 - 3	3	76	79
	3.8%	96.2%	21.9%
	1.2%	71.7%	
4-6	28	19	47
	59.6%	40.4%	13.1%
	11.0%	17.9%	
7-9	41	4	45
	91.1%	8.9%	12.5%
	16.1%	3.8%	
10-12	40	4	44
	90.9%	9.1%	12.2%
	15.7%	3.8%	
13 Ó MAS	142	3	145
	97.9%	2.1%	40.3%
	55.9%	2.8%	
Total	254	106	360
	70.6%	29.4%	

GRUPO EDAD (MESES)	AZUCAR O MIEL SI	NO	Total
0 - 3	16	63	79
	20.3%	79.7%	21.9%
	5.9%	69.2%	
4-6	36	11	47
	76.6%	23.4%	13.1%
	13.4%	12.1%	
7-9	39	6	45
	86.7%	13.3%	12.5%
	14.5%	6.6%	
10-12	38	6	44
	86.4%	13.6%	12.2%
	14.1%	6.6%	
13 Ó MAS	140	5	145
	96.6%	3.4%	40.3%
	52.0%	5.5%	
Total	269	91	360
	74.7%	25.3%	

GRUPO EDAD (MESES)	AÑADE VEGETALES VERDES COMO CHAYOTE, AYOTE SI	NO	Total
0 - 3	3	76	79
	3.8%	96.2%	21.9%
	1.8%	38.6%	
4-6	17	30	47
	36.2%	63.8%	13.1%
	10.4%	15.2%	
7-9	26	19	45
	57.8%	42.2%	12.5%
	16.0%	9.6%	
10-12	26	18	44
	59.1%	40.9%	12.2%
	16.0%	9.1%	
13 Ó MAS	91	54	145
	62.8%	37.2%	40.3%
	55.8%	27.4%	
Total	163	197	360
	45.3%	54.7%	

GRUPO EDAD (MESES)	ACEITE O MANTECA SI	NO	Total
0 - 3	3	76	79
	3.8%	96.2%	21.9%
	1.2%	68.5%	
4-6	28	19	47
	59.6%	40.4%	13.1%
	11.2%	17.1%	
7-9	34	11	45
	75.6%	24.4%	12.5%
	13.7%	9.9%	
10-12	43	1	44
	97.7%	2.3%	12.2%
	17.3%	0.9%	
13 Ó MAS	141	4	145
	97.2%	2.8%	40.3%
	56.6%	3.6%	
Total	249	111	360
	69.2%	30.8%	

GRUPO EDAD (MESES)	SAL DE BOLSITA SI	NO	Total
0 - 3	11	68	79
	> 13.9%	86.1%	> 21.9%
	4.0%	79.1%	
4-6	34	13	47
	> 72.3%	27.7%	> 13.1%
	12.4%	15.1%	
7-9	43	2	45
	> 95.6%	4.4%	> 12.5%
	15.7%	2.3%	
10-12	43	1	44
	> 97.7%	2.3%	> 12.2%
	15.7%	1.2%	
13 Ó MAS	143	2	145
	> 98.6%	1.4%	> 40.3%
	52.2%	2.3%	
Total	274	86	360
	76.1%	23.9%	

ANEMIA	Frec	Porcent	Acum
SI	178	49.4%	49.4%
NO	182	50.6%	100.0%
Total	360	100.0%	

ANEMIA	SEXO F	M	Total
SI	81	97	178
	> 45.5%	54.5%	> 49.4%
	47.9%	50.8%	
NO	88	94	182
	> 48.4%	51.6%	> 50.6%
	52.1%	49.2%	
Total	169	191	360
	46.9%	53.1%	

GRUPO EDAD (MESES)	ANEMIA SI	NO	Total
0 - 3	35	44	79
	> 44.3%	55.7%	> 21.9%
	19.7%	24.2%	
4-6	19	28	47
	> 40.4%	59.6%	> 13.1%
	10.7%	15.4%	
7-9	22	23	45
	> 48.9%	51.1%	> 12.5%
	12.4%	12.6%	
10-12	20	24	44
	> 45.5%	54.5%	> 12.2%
	11.2%	13.2%	
13 Ó MAS	82	63	145
	> 56.6%	43.4%	> 40.3%
	46.1%	34.6%	
Total	178	182	360
	49.4%	50.6%	

ANEMIA	AREA U	R	Total
SI	83	95	178
	> 46.6%	53.4%	> 49.4%
	53.5%	46.3%	
NO	72	110	182
	> 39.6%	60.4%	> 50.6%
	46.5%	53.7%	
Total	155	205	360
	43.1%	56.9%	

ANEMIA	MUNICIPIO CP	JP	AC	ST	SP	SD	VS	NG	Total
SI	4	33	15	9	5	22	16	74	178
	> 2.2%	18.5%	8.4%	5.1%	2.8%	12.4%	9.0%	41.6%	> 49.4%
	33.3%	55.0%	62.5%	37.5%	41.7%	61.1%	44.4%	47.4%	
NO	8	27	9	15	7	14	20	82	182
	> 4.4%	14.8%	4.9%	8.2%	3.8%	7.7%	11.0%	45.1%	> 50.6%
	66.7%	45.0%	37.5%	62.5%	58.3%	38.9%	55.6%	52.6%	
Total	12	60	24	24	12	36	36	156	360
	3.3%	16.7%	6.7%	6.7%	3.3%	10.0%	10.0%	43.3%	

OPV123

GRUPO EDAD	0	1	2	3	Total
0-11	70	41	27	60	198
	> 35.4%	20.7%	13.6%	30.3%	> 55.0%
	| 84.3%	87.2%	58.7%	32.6%	|
12 Ó MAS	13	6	19	124	162
	> 8.0%	3.7%	11.7%	76.5%	> 45.0%
	| 15.7%	12.8%	41.3%	67.4%	|
Total	83	47	46	184	360
	| 23.1%	13.1%	12.8%	51.1%	|

DPT123

GRUPO EDAD	0	1	2	3	Total
0-11	70	45	28	55	198
	> 35.4%	22.7%	14.1%	27.8%	> 55.0%
	| 84.3%	88.2%	53.8%	31.6%	|
12 Ó MAS	13	6	24	119	162
	> 8.0%	3.7%	14.8%	73.5%	> 45.0%
	| 15.7%	11.8%	46.2%	60.4%	|
Total	83	51	52	174	360
	| 23.1%	14.2%	14.4%	48.3%	|

MEASLES

GRUPO EDAD	0	1	Total
0-11	195	3	198
	> 98.5%	1.5%	> 55.0%
	| 77.7%	2.8%	|
12 Ó MAS	56	106	162
	> 34.6%	65.4%	> 45.0%
	| 22.3%	97.2%	|
Total	251	109	360
	| 69.7%	30.3%	|

BCG

GRUPO EDAD	0	1	Total
0-11	45	153	198
	> 22.7%	77.3%	> 55.0%
	| 70.3%	51.7%	|
12 Ó MAS	19	143	162
	> 11.7%	88.3%	> 45.0%
	| 29.7%	48.3%	|
Total	64	296	360
	| 17.8%	82.2%	|

GRUPO EDAD	COMPLETE 0	1	Total
0-11	197	1	198
	> 99.5%	0.5%	> 55.0%
	74.3%	1.1%	
12 Ó MAS	68	94	162
	> 42.0%	58.0%	> 45.0%
	25.7%	98.9%	
Total	265	95	360
	73.6%	26.4%	

GRUPO EDAD	VITAMINT 0	1	2	3	4	Total
0-11	181	17	0	0	0	198
	> 91.4%	8.6%	0.0%	0.0%	0.0%	> 55.0%
	75.7%	20.2%	0.0%	0.0%	0.0%	
12 Ó MAS	58	67	31	5	1	162
	> 35.8%	41.4%	19.1%	3.1%	0.6%	> 45.0%
	24.3%	79.8%	100.0%	100.0%	100.0%	
Total	239	84	31	5	1	360
	66.4%	23.3%	8.6%	1.4%	0.3%	

Annex: KPC form used (Spanish version)

PVO / PAIS: **NICARAGUA** **IDNUM:**_____

CUESTIONARIO SOBRE CONOCIMIENTOS, PRACTICAS Y COBERTURA EN SUPERVIVENCIA INFANTIL

CHONTALES, NICARAGUA 13 de Junio / 2000

Las siguientes preguntas son para las madres de niños menores de dos años (24 meses)

Fecha de la entrevista: _____/_____/_____ **Re-entrevista:** _____/_____/_____

Nombre del Entrevistador:_____ Firma:_____

Supervisor :_____ Firma:_____

Comunidad:_____

Municipio: _____ **(1. Cuapa, 2. Juigalpa, 3. Acoyapa, 4. Santo Tomás, 5. San Pedro, 6. Santo Domingo, 7. Villa Sandino, 8. Nueva Guinea).**

Área: _____ **(1. Urbana, 2. Rural)**

1. Nombre y Edad de la madre:

Nombre:_____ Edad (años):_____

2. Nombre, edad y sexo del niño menor de 2 años (24 meses).

Nombre:_____

Fecha de nacimiento: _____/_____/_____ Sexo _____ (1=Masculino, 2=Femenino)
(dd / mm / aa)

Educación y ocupación de la madre:

3. ¿Sabe leer y escribir.....Hasta que grado llegó?
   a. Ninguno ( )
   b. Primaria y no lee ( )
   c. Primaria y si lee ( )
   d. Secundaria ( )
   e. Técnico ( )
   f. Universitario ( )

4. ¿Realiza alguna actividad fuera de su casa?
   a. Si ( )
   b. No ( )

5. ¿Realiza algún trabajo para ganar dinero, durante el año?
   (puede marcar más de una respuesta)
   a. Nada ( )
   b. Artesanía / tejido /, etc. ( )
   c. Agricultura ( )
   d. Ganadería ( )
   e. Vendiendo comidas / productos preparados ( )
   f. Servicios domésticos ( )
   g. Dueño de tienda / pulpería ( )

h. Trabajador asalariado ( )
i. Otros (especifique) _____

6. ¿Quién cuida a **(nombre del niño)** mientras Ud. trabaja o está fuera de su casa?
(puede marcar más de una respuesta)
a. El niño va con la mamá ( )
b. El esposo / compañero ( )
c. Hermanos mayores ( )
d. Parientes ( )
e. Vecinos / amigos ( )
f. Empleada doméstica ( )
g. CDI / SIR ( )

Lactancia materna y nutrición:

7. ¿Le está dando de mamar a **(nombre del niño)** ahora?
a. Si ( ) -------→ **PASE A LA PREGUNTA # 9**
b. No ( )

8. ¿Le ha dado alguna vez de mamar a **(nombre del niño)**?
a. Si ( )
b. No ( )-------→ **PASE A LA PREGUNTA # 10**

9. Después del parto, ¿Cuándo le dio de mamar por primera vez a **(nombre del niño)**?
a. Durante la primera media hora después del parto ( )
b. Durante la segunda media hora después del parto ( )
c. Entre 1 y 8 horas después del parto ( )
d. Más de 8 horas después del parto ( )
e. No se acuerda ( )

10. Realice las siguientes preguntas para conocer si **(nombre del niño)** está tomando algún tipo de alimento o líquido.
a. ¿Le está dando agua o cocimiento a **(nombre del niño)**?
a.1 Si ( )
a.2 No ( )

b. ¿Le está dando leche de vaca, de cabra o en polvo a **(nombre del niño)**?
b.1 Si ( )
b.2 No ( )

c. ¿Le está dando comida suave como atoles, purés o cereales a **(nombre del niño)**?
c.1 Si ( )
c.2 No ( )

d. ¿Le está dando jugos o frutas a **(nombre del niño)**?
d.1 Si ( )
d.2 No ( )

e. ¿Le está dando zanahorias, ayote, mangos o papaya a **(nombre del niño)**?
e.1 Si ( )
e.2 No ( )

f. ¿Le está dando vegetales verdes como hojas de yuca, rábano o espinaca a **(nombre del niño)**?
f.1 Si ( )

f.2 No ( )

g. ¿Le está dando carne o pescado a **(nombre del niño)**?
g.1 Si ( )
g.2 No ( )

h. ¿Le está dando frijoles o soya a **(nombre del niño)**?
h.1 Si ( )
h.2 No ( )

i. ¿Le está dando huevo, cuajada o queso a **(nombre del niño)**?
i.1 Si ( )
i.2 No ( )

j. ¿Le está añadiendo vegetales verdes como chayote, ayote a los alimentos de **(nombre del niño)**?
j.1 Si ( )
j.2 No ( )

k. ¿Le pone azúcar o miel a los alimentos de **(nombre del niño)**?
k.1 Si ( )
k.2 No ( )

l. ¿Le pone aceite o manteca a los alimentos de **(nombre del niño)**?
l.1 Si ( )
l.2 No ( )

m. ¿Le pone sal de bolsita a los alimentos de **(nombre del niño)**?
m.1 Si ( )
m.2 No ( )

11. ¿Qué alimentos contienen vitamina "A" para la prevención de la ceguera nocturna?
(puede marcar más de una respuesta)

a. No sabe ( )
b. Vegetales verdes ( )
c. Frutas de color amarillo intenso ( )
d. Carne / pescado ( )
e. Lactancia materna ( )
f. Yema de huevos ( )
g. Otros (especifique) _____

12. ¿Qué alimentos ricos en hierro conoce Ud. para prevenir la anemia en los niños?
(puede marcar más de una respuesta)

a. No sabe ( )
b. Moronga ( )
c. Bazo de cerdo ( )
d. Mantequilla ( )
e. Bazo de res ( )
f. Hojas verdes ( )
g. Frijoles ( )
h. Soya ( )
i. Hígado de res ( )
j. Otros (especifique) _____

Control del crecimiento

13. ¿Tiene **(nombre del niño)** su tarjeta infantil para el control del peso?

a. Si ( ) ---→**Pida que se lo muestre**
b. Perdió el carnet ( ) ---→**PASE A LA PREGUNTA # 17**
c. No ( ) ---→**PASE A LA PREGUNTA # 17**

Mire el carnet del niño y registre la siguiente información:

Ha sido pesado el niño en los últimos 4 meses

a. Si ( )
b. No ( )

14.

Mire también la tarjeta de control de crecimiento e indique si hay espacio para registrar las cápsulas con vitamina "A".

a. Si ( )
b. No ( ) →**PASE A LA PREGUNTA # 17**

15.

Si es sí, registre todas las fechas de todas las cápsulas de vitamina "A", suministradas a éste niño, en el espacio de abajo.

(dd / mm / aa)

1. _____/_____/_____
2. _____/_____/_____
3. _____/_____/_____
4. _____/_____/_____

Enfermedades Diarréicas

16. ¿Ha tenido **(nombre del niño),** diarrea en las dos últimas semanas?

a. Si ( )
b. No ( )------→**PASE A LA PREGUNTA # 25**
c. No sabe ( )------→**PASE A LA PREGUNTA # 25**

17. Cuando **(nombre del niño),** tenía diarrea, ¿Le dio de mamar?

(Lea las opciones a la madre)

a. Más ( )
b. Igual ( )
c. Menos ( )
d. Paró completamente ( )
e. Ya no le daba el pecho ( )

18. Cuando **(nombre del niño),** tenía diarrea, ¿Le dio otros líquidos además de su pecho?
(Lea las opciones a la madre)

a. Más ( )
b. Igual ( )
c. Menos ( )
d. Dejó de darle completamente ( )
e. Sólo pecho ( )

19. Cuando **(nombre del niño),** tenía diarrea, ¿Le dio alimentos suaves o purés?
(Lea las opciones a la madre)

a. Más ( )
b. Igual ( )
c. Menos ( )
d. Dejó de darle completamente ( )
e. Sólo pecho ( )

20. Cuando **(nombre del niño),** se estaba recuperando de la diarrea, ¿Le dio alimentos suaves o purés?
(Lea las opciones a la madre)

a. Más ( )
b. Igual ( )
c. Menos ( )
d. Dejó de darle completamente ( )
e. Sólo pecho ( )

21. Cuando **(nombre del niño)** tuvo diarrea, ¿Dio algún tratamiento? ¿Cuál?
(puede marcar más de una respuesta)

a. Nada ( )
b. Sobre de rehidratación oral (SRO) ( )
c. Solución de agua y sal (suero casero) ( )
d. Soluciones a base de cereales o atoles ( )
e. Infusión u otros líquidos ( )
f. Medicinas anti-diarréicas o antibióticos ( )
g. Otros (especifique) _____

22. Cuando (nombre del niño) **tuvo diarrea, ¿Pidió consejo o ayuda?.**

a. Si ( )
b. No ( ) **---→PASE A LA PREGUNTA # 25**

23. ¿Dónde pidió el consejo o ayuda para la diarrea de (nombre del niño)?
(puede marcar más de una respuesta)

a. Hospital general ( )
b. Centro de salud / puesto de salud ( )
c. Médico /clínica particular ( )
d. Farmacia ( )
e. Brigadista de salud / URO ( )
f. Curandero ( )
g. Partera ( )
h. Parientes o amigos ( )
i. Otros (especifique)_____

24. Cuando (nombre del niño) **está con diarrea, ¿Cómo se da cuenta que está grave?**
(puede marcar más de una respuesta)

a. No sabe ( )
b. Vómitos ( )

c. **Fiebre** ( )
d. **Somnoliento, ojos hundidos, pliegue / piel, bebe con sed, inquieto / irritable** ( )
e. **Mollera hundida** ( )
f. **Orina poco** ( )
g. **Diarrea prolongada (más de 14 días)** ( )
h. **Sangre en las heces** ( )
i. **Pérdida del apetito** ( )
j. **Débil o desganado** ( )
k. **Otros (especifique)**_____

Enfermedades respiratorias

25. **¿Ha estado** (nombre del niño) **enfermo con tos o problemas respiratorios en las dos últimas semanas?**
    a. **Si** ( )
    b. **No** ( ) ----→ PASE A LA PREGUNTA # 31

26. **¿Ha estado** (nombre del niño) **con dificultad en respirar, o respiraba como cansado (disnea), cuando enfermó?**
    a. **Si** ( )
    b. **No** ( )-------→ PASE A LA PREGUNTA # 31
    c. **No sabe** ( )-------→ PASE A LA PREGUNTA # 31

27. **¿Ha pedido Ud. consejo o ayuda para** (nombre del niño) **cuando estuvo enfermo con tos y dificultad respiratoria?**
    a. **Si** ( )
    b. **No** ( )-----→ PASE A LA PREGUNTA # 31

28. **¿Cuánto tiempo después llevó a** (nombre del niño) **para el tratamiento contra la tos / respiración rápida?**
    a. **El mismo día** ( )
    b. **Al siguiente día** ( )
    c. **A los dos días** ( )
    d. **Tres o más días** ( )

29. **¿Dónde recibió consejo o ayuda para la tos y dificultad respiratoria de** (nombre del niño)**?**
    (puede marcar más de una respuesta)
    a. **Hospital general** ( )
    b. **Centro de salud / puesto de salud** ( )
    c. **Médico / clínica particular** ( )
    d. **Farmacia** ( )
    e. **Brigadista de salud / URO** ( )
    f. **Curandero** ( )
    g. **Partera** ( )
    h. **Parientes o amigos** ( )
    i. **Otros (especifique)**_____

30. **Cuando** (nombre del niño) **está con una enfermedad respiratoria, ¿Cómo se da cuenta que** (nombre del niño) **está grave?**
    (puede marcar más de una respuesta)
    a. **No sabe** ( )
    b. **Respiración rápida y agitada** ( )
    c. **Retracciones inter-costales** ( )
    d. **Pérdida del apetito** ( )
    e. **Fiebre** ( )
    f. **Tos** ( )
    g. **Otro (especifique)** _____

Inmunizaciones

31. **¿Tiene Ud. la tarjeta de vacunas de** (nombre del niño)**?**

a. Si ( )
b. Perdió el carnet ( )----→ PASE A LA PREGUNTA # 34
c. No ( )----→ PASE A LA PREGUNTA # 34

32. **Mire la tarjeta de vacunación y registre las fechas de las vacunas en el espacio correspondiente**

BCG _____/_____/_____
(dd / mm / aa)

ANTIPOLIO 1ª_____/_____/_____
2ª_____/_____/_____
3ª_____/_____/_____
(dd / mm / aa)

DPT / PENTAVALENTE 1ª_____/_____/_____
2ª_____/_____/_____
3ª_____/_____/_____
(dd / mm / aa)

ANTISARAMPION /MMR _____/_____/_____
_____/_____/_____

Mire en la tarjeta de inmunización, e indique si hay espacios para registrar las cápsulas de vitamina "A". Si es así-------→PASE A LA PREGUNTA # 16 y registre las fechas de todas las cápsulas de vitamina "A", dadas a este niño en la casilla 18 y 19

Salud Materna

33. ¿Tiene Ud. su tarjeta de control de embarazo?
a. Si ( ) PIDA QUE SE LO MUESTRE
b. Perdió la tarjeta ( )----→PASE A LA PREGUNTA # 39
c. No ( )----→PASE A LA PREGUNTA # 39

34. **Mire la tarjeta de control de embarazos y registre el número de vacunas TT o DT en el espacio correspondiente:**
a. Ninguna ( )
b. Una ( )
c. Dos ó más ( )

35. **Mire la tarjeta de control de embarazos y registre el número de veces que ha recibido suplemento de hierro:**
a. Ninguna ( )
b. Una ( )
c. dos o más ( )

36. **Tiene la tarjeta de control de embarazos espacios para anotar visitas pre-natales:**
   a. Si ( )
   b. No ( ) ------→PASE A LA PREGUNTA # 39

37. **Si es sí, ¿Cuántas veces fue la madre a visitas prenatales?**
   a. Una ( )
   b. dos o más ( )
   c. ninguna ( )

38. **¿Está Ud. ahora embarazada?**
   a. **Si** ( )------→PASE A LA PREGUNTA # 43
   b. **No** ( )

39. **¿Quisiera Ud. tener otro hijo en los próximos dos años?**
   a. **Si** ( ) -------→PASE A LA PREGUNTA # 43
   b. **No** ( )
   c. **No sabe** ( )

40. **¿Está Ud. planificando su familia?**
   a. **Si** ( )
   b. **No** ( )----→PASE A LA PREGUNTA # 43

41. **¿Cuál es el método principal de planificación que Ud. o su esposo están usando?**
   a. **Ella está operada** ( )
   b. **Vasectomía** ( )
   c. **Norplant** ( )
   d. **Inyecciones** ( )
   e. **Pastillas anticonceptivas** ( )
   f. **Dispositivo Intrauterino (DIU)** ( )
   g. **Diafragma** ( )
   h. **Condones** ( )
   i. **Espuma o gel** ( )
   j. **Lactancia materna exclusiva** ( )
   k. **Método del ritmo** ( )
   l. **Abstinencia** ( )
   m. **Coito interrumpido** ( )
   n. **Otros** ( )

42. **Cuando ud. estaba embarazada de** (nombre del niño), **¿Visitó algún centro de salud (clínica u hospital) para su control del embarazo?**
   a. **Si** ( )
   b. **No** ( )

43. **Cuando nació** (nombre del niño), **¿Quién le amarró y cortó el ombligo?**
   a. **Ella misma** ( )
   b. **Un miembro de la familia** ( )
   c. **Partera** ( )
   d. **Personal de salud (médico o enfermera)** ( )
   e. **No sabe** ( )
   f. **Otros (especifique)**_____

44. ¿Se realizó Ud. un chequeo de su salud después que nació (**nombre del niño**)?
   a. Sí ( )
   b. No ( ) **----→PASE A LA PREGUNTA # 47**

c. **No recuerda** ( ) ----→PASE A LA PREGUNTA # 47

45. ¿Cuántos días o semanas después del parto tuvo lugar el primer chequeo?

a. Primeros 2 días ( )
b. De 2 a 10 días ( )
c. Más de 10 días ( )

46. En el primer mes después del parto, ¿Usted recibió una dosis de vitamina "A" como esta?

MOSTRAR CAPSULA

a. Si ( )
b. No ( )
c. No sabe ( )

Antropometría (estos datos serán llenados por el personal que realiza el examen)

47. Peso (Kilogramos)

		.		**Kg**

48. Talla (centímetros). Método de medición: acostado.

			.		**cm**

49. Hemoglobina

		.		**g/dl**

Annex **: Credits
Lista de participantes Encuesta Medio Término

Nombres y apellidos	Cargos	Institución
Dr. Luis Benavente	Director Asociado Salud Mujer - Niño	**Sede HOPE Center**
Robert Grabman	Director Regional las Américas	
Dra. Bettina Schwethelm	Directora Salud Mujer - Niño	
Dr. Charles Wallace	Representante nacional HOPE	**Sede HOPE Nicaragua**
Lic. Alejandro Soza	Administrador	
Daysi Downs	Secretaria y Logística	
Dra. Carla Rothschuh	Directora AIN	**MINSA Chontales**
Lic. María Isabel Bolaños	Directora componente Nutrición AIN	
Enf. María Elena Hurtado	Responsable de componente Parteras	
Lic. Astrid Delleman	Resp. Programa de detección temprana de la niñez	**FUNPRID**
Lic. Sanna		
Lic. Manuel García Noguera	Director HOPE Chontales	**HOPE en Chontales**
Dra. Dinorah Díaz Blandón	Coordinador Municipal	
Dr. Xavier Luna Mena	Coordinador Municipal	
Lic. Gabriela Aragón Gutiérrez	Coordinador Municipal	
Humberto Matus Sobalvarro	Coordinador Municipal	
Lic. Samuel Reyna Duarte	Coordinador SIS	
Javier Arias Suárez	Asist. Administrativo	
Martha Vargas	Secretaria	
Adolfo Cienfuegos Marenco	Conductor	
Eliezer Farrach Cortez	Conductor	
Jerry Ortega	Digitador de datos temporal	Digitador, Encuestadores / Supervisores y equipo de levantamiento de datos antropométricos.
Henry Díaz Mora	Encuestador / supervisor	
Adela del Socorro Osorio Báez	Encuestador / supervisor	
Rosa Argentina Rivas Urbina	Encuestador / supervisor	
Corina Duarte Molina	Encuestador / supervisor	
Danilo Castilla Vásquez	Encuestador / supervisor	
Eliezer Farrach Cortez	Encuestador / supervisor	
Tania Libertad Arias Picado	Encuestador / supervisor	
Javier García Martínez	Antropometría / Hemoglobina	
Angel David Robleto López	Antropometría	
Carril Rodríguez Calero	Antropometría	
Lenín Jerez Urbina	Antropometría	
Francisco Gaitán Cruz	Antropometría / Hemoglobina	

Annex **: Conglomerates

Annex: Clusters selected

Municipality	Setting	Community name	Total population
Acoyapa	Rural	Zapote	190
Acoyapa	Urbano	Zonas Urbanas	11591
Cuapa	Urbano	Cuapa	5,014
Juigalpa	Urbano	Zona # 2	6112
Juigalpa	Urbano	Zona # 3	4917
Juigalpa	Urbano	Zona # 4	5923
Juigalpa	Urbano	Zona # 6	6125
Juigalpa	Urbano	Zona # 8	4848
Nueva Guinea	Rural	Jacinto Baca	785
Nueva Guinea	Rural	San Pablo	550
Nueva Guinea	Rural	La Angostura	306
Nueva Guinea	Rural	Naciones Unidas	2567
Nueva Guinea	Rural	Nuevo León	856
Nueva Guinea	Rural	Lajerito	360
Nueva Guinea	Rural	Esperancita # 2	401
Nueva Guinea	Rural	La Unión	1303
Nueva Guinea	Rural	Rubén Darío	790
Nueva Guinea	Rural	La Fonseca	1735
Nueva Guinea	Rural	Talolinga	2080
Nueva Guinea	Urbano	Nueva Guinea (2 Zonas urbanas)	16770
San Pedro	Urbano	Zona # 1	612
Santo Domingo	Rural	Dos Bocas	219
Santo Domingo	Rural	Palmira II	489
Santo Domingo	Rural	Tawa	411
Santo Tomás	Rural	Sierrawás	384
Santo Tomás	Urbano	Barrio San José	1615
Villa Sandino	Rural	Garrobo Grande	120
Villa Sandino	Rural	La Gateada	827
Villa Sandino	Urbano	Zona # 1 (Villa Sandino)	895

Guatemala , basic health indicators in selected areas
Bettina: Victor is reviewing some numbers

Indicator	Coffee estates, KPC survey 1997-98			
	Migrants	Residents	MOH statistics for *(specify universe, source of data) **	Govt. goals as stated in its plan for 2000-2004
Infant mortality rate x1000 living births	ND	ND	ENSMI 98/99: 58 x 100 nv	45.00
Maternal mortality rate x 100 000 births	ND	ND	PMSS 99: 97 x 100,000	??
Chronic malnutrition rate, children <5 years	ND	ND	ENSMI 98/99: 54.8%	46.4
Home has a latrine or flushing toilet	ND	ND	ENSMI 98/99: 54%	86.9
Women 15-49 years having complete primary instruction	0%	43%	??	40.8
Mother cares the infant while she is working/ does not work outside home	82%	64%	??	91.6% of infants living with her mother
Prenatal care received from a nurse or doctor	38%	42%	??	59.6
Prenatal care since the first trimester of pregnancy	30.3%	42.3%	??	50.5
Newborn delivered by a nurse or doctor	1.8%	28. 8%	??	40.6
Institutional birth	11.1%??	32.4%??	??	40.4
Family planning users among all united women	1.5%	20.7	??	23.1
Infants <4m receiving exclusive breast feeding	25% (<6m?)	48%	??	42.8
Children<5y whose mothers had 2+ doses of TT vaccine	ND	62%	??	56.0
Children 12-23m protected against measles	7%	84%	??	80.6
Children 12-23m with complete immunization schedule	2%	35%	??	59.5
ORT use rate among children <5y with a diarrhea episode in the last 2 weeks	32%	13%	??	33.5
Children<5y with respiratory infection in the last 2 weeks, who were taken to a health service	42% said she went to the clinic in the coffee estate	21.5	??	37.4

ND: no data E: ENSMI98-99: Encuesta Nacional de Salud Maternoinfantil PMSS ??

- Management plan developed by PH

Management Plan

Consistent with Project HOPE's strategy for the Americas Region, HOPE Nicaragua has been evolving over the past few months from a set of projects (including the Child Survival Project in Chontales) each working in relative independence to a program. A project is defined as a limited term set of activities to reach a particular objective. A program is an integrated portfolio of projects.

Until now, each project in Nicaragua had been headed by a Project Director, with support from a part-time national representative based in Managua. HOPE decided the size of the program and its increased presence in Nicaragua justified a full time position to direct and provide integrated oversight to individual projects.

A new full time Country Director, Mr. Francisco Torres has been named and will begin his new functions in Managua on October 23. He is transferring from his current position of Director of HOPE-Macedonia. Two of the former Project Directors have been rehired as Project Managers, and will work under supervision and guidance of the country director. The Country Director will facilitate coordination among the projects, so that lessons learned and best practices are shared, creating synergies to make the whole greater than the sum of the parts. The country director will also be in charge of external relations and staff development.

With this change, the administration in each project becomes more efficient. For example, instead of having 3 different administrators (one in each project) dealing with funds directly from HOPE Center, the money is now sent to and managed by HOPE Managua. On the country level, funds are now advanced and reimbursed on the basis of monthly financial reports submitted by the projects to the Managua office. The administrative staff in each project is being downsized.

Shortly before the midterm evaluation, the Chontales CS Project Director was terminated and a new Project Manager was named. The new Project Manager is Dr. Mario Ortega who was transferred from his similar position in Jinotega. This change was made because of various programmatic, administrative and management deficiencies in Chontales as identified by Project HOPE staff and confirmed by an external consultant, Mr. Frank Sullivan, in his report dated June 21, 2000 and in his verbal debriefing.

The termination of Chontales Project Director cleared a potential road block to restructuring the Chontales office under the new program focus and to rapidly implementing the recommendations of the MTE. However, the reason for the termination in this case was performance, not restructuring. It is also important to note that although the consultant's observations were duly noted, the decision to terminate was not the consultant's, it was Project HOPE's.

Project HOPE anticipates the following positive results in Nicargua in moving from project-based to program-based operations:

1) more effective projects through programmatic synergies
2) management and administrative efficiencies
3) more rational use of resources: financial resources, physical assets, and human
resources
4) greater impact at the policy level: the staff working in Chontales had limited access to policy decisions at country level.
5) greater stability, long term commitment in the country
6) ability to absorb complementary funding:
7) retention of key staff once a project is over
8) more opportunity for staff development

- Financial Report

The People-to-People Health Foundation, Inc. (Project HOPE)
Nicaragua Child Survival (Chontales)

	Federal	Non-Federal
Personnel + Fringe Benefits	425,700	0
Travel + Per Diems	15,614	49
Equipment	0	64,700
Supplies	4,474	55,374 *
Contractual Services	49,412	0
Other Direct Costs	268,313	635
Indirect Costs	120,782	172,210
TOTAL	884,295	292,968

*2,048,308 in GIK also shipped.